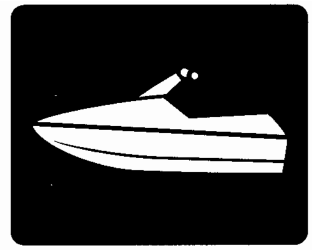
YAMAHA



WaveRunner GP1300R

SUPPLEMENTARY SERVICE MANUAL

LIT-18616-02-90

F1G-28197-1G-1X

NOTICE

This Supplementary Service Manual has been prepared to introduce new service and new data information for the GP1300R which are based on the 2003 GP1300R. For complete information on service procedures, it is necessary to use this Supplementary Service Manual together with the following manual.

GP1300R SERVICE MANUAL: F1G-28197-1F-11 (LIT-18616-02-44)

A10001-0*

WaveRunner GP1300R
SUPPLEMENTARY SERVICE MANUAL

1st Edition, October 2004

Printed in USA
LIT-18616-02-90

HOW TO USE THIS MANUAL

MANUAL FORMAT

All of the procedures in this manual are organized in a sequential, step-by-step format. The information has been compiled to provide the mechanic with an easy to read, handy reference that contains comprehensive explanations of all disassembly, repair, assembly, and inspection operations.
In this revised format, the condition of a faulty component will precede an arrow symbol and the course of action required will follow the symbol, e.g.,

- Bearings
  Pitting/scratches → Replace.

To assist you in finding your way through this manual, the section title and major heading is given at the top of every page.

ILLUSTRATIONS

The illustrations within this service manual represent all of the designated models.

CROSS REFERENCES

The cross references have been kept to a minimum. Cross references will direct you to the appropriate section or chapter.

IMPORTANT INFORMATION

In this Service Manual particularly important information is distinguished in the following ways.

⚠ The Safety Alert Symbol means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

⚠ WARNING

Failure to follow WARNING instructions could result in severe injury or death to the machine operator, passenger(s), a bystander, or a person inspecting or repairing the watercraft.

CAUTION:

A CAUTION indicates special precautions that must be taken to avoid damage to the watercraft.

NOTE:

A NOTE provides key information to make procedures easier or clearer.

IMPORTANT:

This part has been subjected to change of specification during production.

HOW TO USE THIS MANUAL

① To help identify parts and clarify procedure steps, there are exploded diagrams at the start of each removal and disassembly section.

② Numbers are given in the order of the jobs in the exploded diagram.

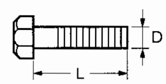
③ Symbols indicate parts to be lubricated or replaced (see "SYMBOLS").

④ A job instruction chart accompanies the exploded diagram, providing the order of jobs, names of parts, notes in jobs, etc.

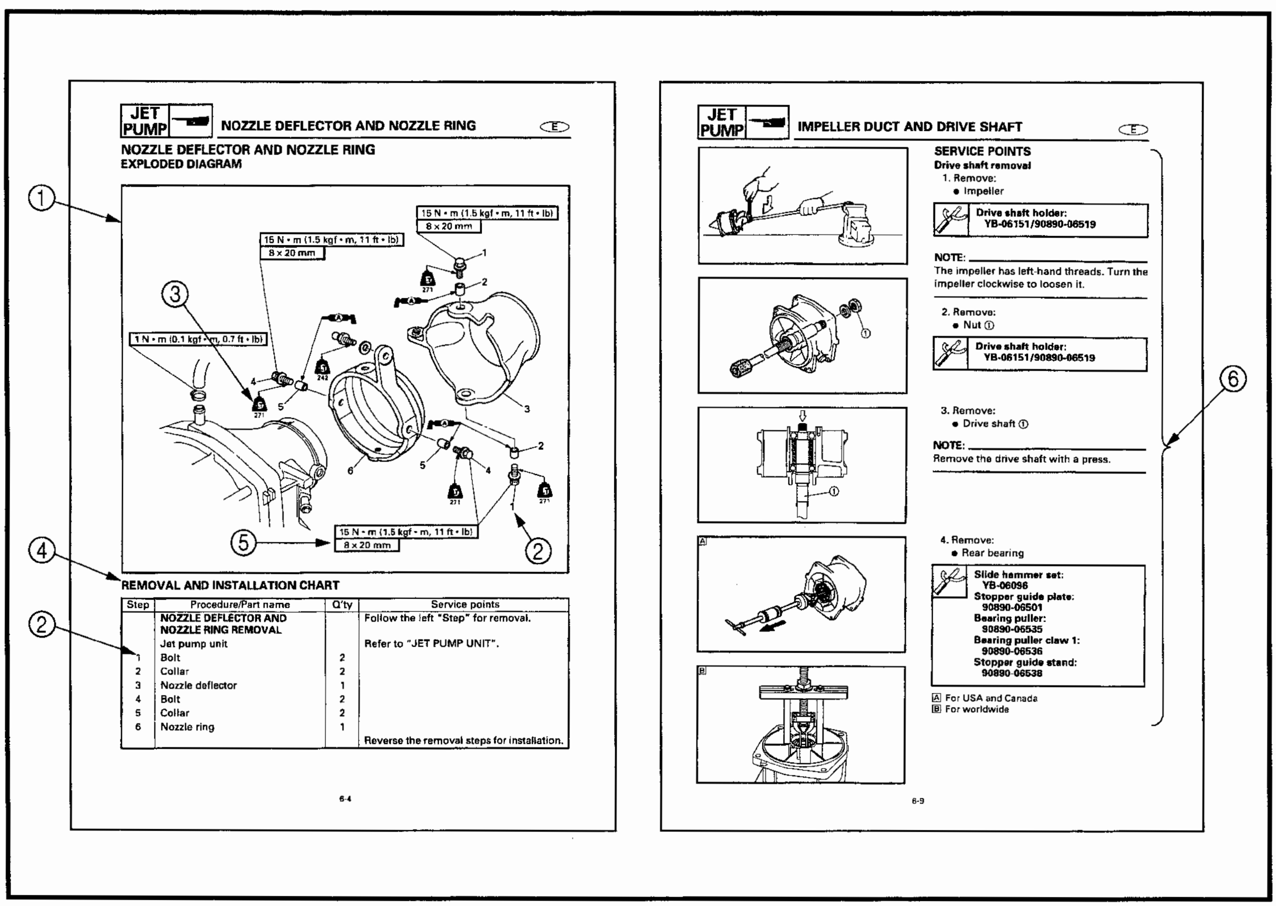
⑤ Dimension figures and the number of parts, are provided for fasteners that require a tightening torque.

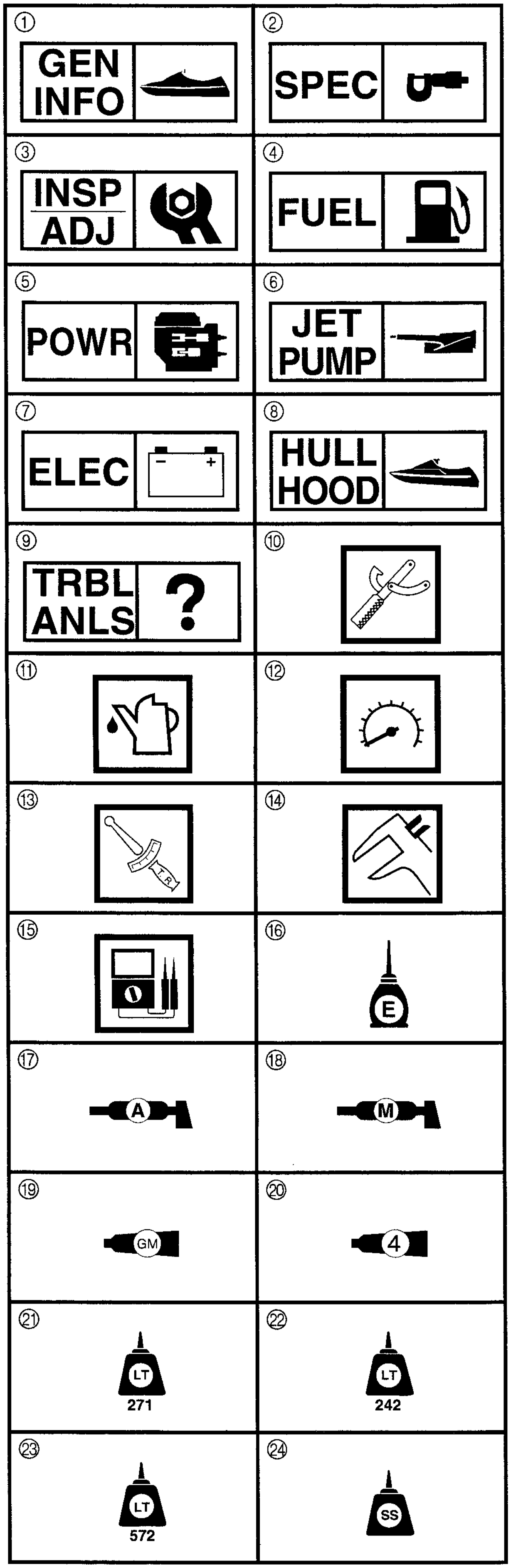
Example:

Bolt or screw size | 10 × 25 mm | : M10 (D) × 25 mm (L)



⑥ Jobs requiring more information (such as special service tools and technical data) are described sequentially.





A50001-1-4

SYMBOLS

Symbols ① to ⑨ are designed to indicate the content of a chapter.

① General Information
② Specifications
③ Periodic Inspection and Adjustment
④ Fuel System
⑤ Power Unit
⑥ Jet Pump Unit
⑦ Electrical System
⑧ Hull and Hood
⑨ Trouble Analysis

Symbols ⑩ to ⑮ indicate specific data.

⑩ Special service tool
⑪ Specified oil or fluid
⑫ Specified engine speed
⑬ Specified tightening torque
⑭ Specified measurement
⑮ Specified electrical value
(resistance, voltage, electric current)

Symbols ⑯ to ⑱ in an exploded diagram indicate the grade of lubricant and the lubrication point.

⑯ Apply Yamaha 2-stroke motor oil
⑰ Apply water resistant grease
(Yamaha grease A, Yamaha marine grease)
⑱ Apply molybdenum disulfide grease

Symbols ⑲ to ㉔ in an exploded diagram indicate the type of sealant or locking agent and the application point.

⑲ Apply Gasket Maker
⑳ Apply Yamabond No. 4
㉑ Apply LOCTITE 271 (red)
㉒ Apply LOCTITE 242 (blue)
㉓ Apply LOCTITE 572
㉔ Apply silicone sealant

NOTE:
Additional symbols may be used in this manual.

Ⓔ

A30000-0

INDEX

GENERAL INFORMATION

SPECIFICATIONS

PERIODIC INSPECTION AND ADJUSTMENT

JET PUMP UNIT

ELECTRICAL SYSTEM

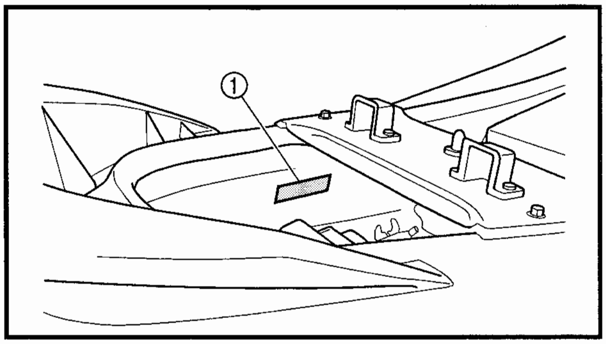
HULL AND HOOD

TROUBLE ANALYSIS

A60700-0*

IDENTIFICATION NUMBERS

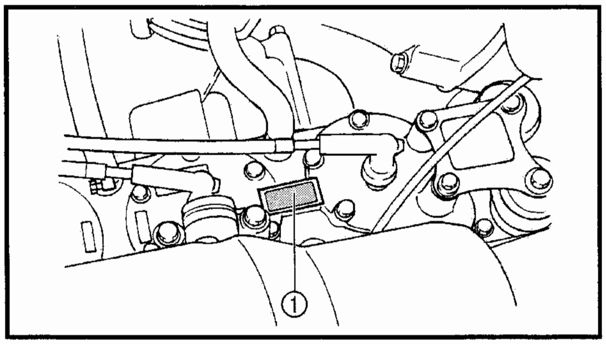
PRIMARY I.D. NUMBER



The primary I.D. number is stamped on a label ① attached inside the engine compartment.

Starting primary I.D. number:
F1G: 809601

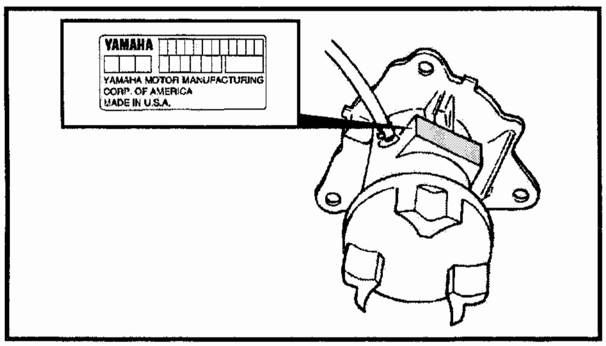
ENGINE SERIAL NUMBER



The engine serial number is stamped on a label ① attached to the engine unit.

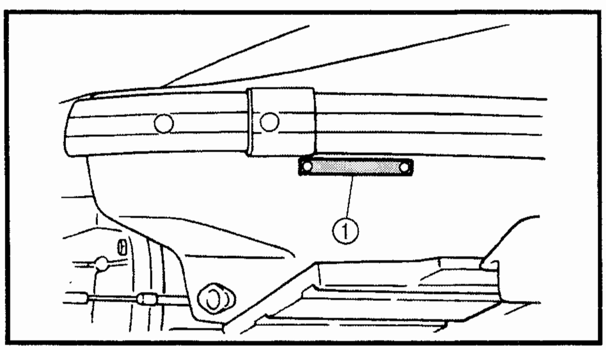
Starting serial number:
60T: 1009801

JET PUMP UNIT SERIAL NUMBER



The jet pump unit serial number is stamped on a label attached to the intermediate housing.

HULL IDENTIFICATION NUMBER (H.I.N.)



The H.I.N. is stamped on a plate ① attached to the hull on the aft, starboard (right) side.

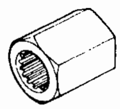
SPECIAL SERVICE TOOLS

Using the special service tools recommended by Yamaha will aid service and enable accurate assembly and tune-up. Improvisations and using improper tools can damage the equipment.

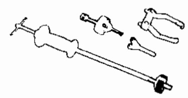
NOTE:

- For USA and Canada, use the special service tools starting with part numbers "J-," "YB-," "YM-," "YS-," "YU-," or "YW-."
- For all other countries, use the special service tools starting with part number "90890-."

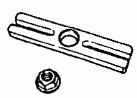
① YB-06151
90890-06519



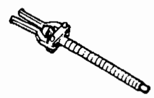
② YB-06096



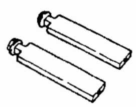
③ 90890-06501



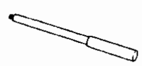
④ 90890-06535



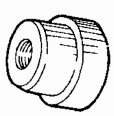
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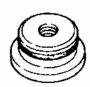
⑥ 90890-06652



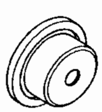
⑦ YB-06112
YB-06196



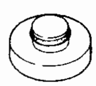
⑧ 90890-06614



⑨ YB-06085



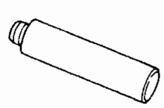
⑩ 90890-06631



⑪ YB-06071



⑫ 90890-06606



⑬ YB-34474



REMOVAL AND INSTALLATION

① Drive shaft holder (impeller)
YB-06151
Drive shaft holder 5 (impeller)
90890-06519

② Slide hammer and adapters
(jet pump bearing)
YB-06096

③ Stopper guide plate (jet pump bearing)
90890-06501

④ Bearing puller assembly
(jet pump bearing)
90890-06535

⑤ Stopper guide stand (jet pump bearing)
90890-06538

⑥ Driver rod L3 (jet pump bearing)
90890-06652

⑦ Bearing housing needle bearing remover
(jet pump bearing)
YB-06112
Drive shaft needle bearing installer
(jet pump oil seal)
YB-06196

⑧ Needle bearing attachment
(jet pump bearing and oil seal)
90890-06614

⑨ Outer race installer—forward gear
(jet pump oil seal)
YB-06085

⑩ Ball bearing attachment (jet pump oil seal)
90890-06631

⑪ Driver handle—large
(jet pump bearing)
YB-06071

⑫ Driver rod LS
(jet pump oil seal)
90890-06606

⑬ Drive shaft needle bearing depth stop
(jet pump bearing)
YB-34474

GENERAL SPECIFICATIONS

Item	Unit	Model
		GP1300R
Model code		
Hull		F1G
Engine/jet		60T
Dimensions		
Length	mm (in)	2,930 (115.4)
Width	mm (in)	1,150 (45.3)
Height	mm (in)	1,020 (40.2)
Dry weight	kg (lb)	297 (655)
Maximum capacity	Person/kg (lb)	2/160 (353)
Performance		
Maximum output	kW (PS) at r/min	125.0 (170) at 7,000
Maximum fuel consumption	l/h (US gal/h, Imp gal/h)	57.0 (15.1, 12.5)
Cruising range	h	1.05
Engine		
Engine type		2-stroke
Number of cylinders		3
Displacement	cm^3 (cu. in)	1,297 (79.1)
Bore × stroke	mm (in)	84 × 78 (3.31 × 3.07)
Compression ratio		
#1, #2, #3		6.0:1
Intake system		Reed valve
Scavenging system		Loop charge
Exhaust system		Wet exhaust
Lubrication system		Variable oil injection
Cooling system		Water cooled
Starting system		Electric starter
Ignition system		Digital CDI
Spark plug model (manufacturer)		BR8ES-11 (NGK)
Spark plug gap	mm (in)	1.0–1.1 (0.039–0.043)
Battery		
Voltage, capacity	V, Ah	12, 19
Generator output	A at r/min	15 at 6,000

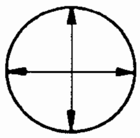
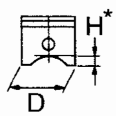
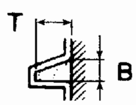
Item	Unit	Model GP1300R
Drive unit		
Propulsion system		Jet pump
Jet pump type		Axial flow, single stage
Impeller rotation		Counterclockwise (viewed from rear)
Transmission		Direct drive from engine
Jet thrust nozzle horizontal angle	Degree	23 + 23
Jet thrust nozzle trim angle	Degree	–10, –5, 0, 5, 10
Trim system		Manual 5 positions
Reverse system		NA
Fuel and oil		
Fuel		Regular unleaded gasoline
Minimum fuel rating	PON*1	86
	RON*2	90
Oil		YAMALUBE 2-W*3
Fuel-oil ratio (wide open throttle)		27:1
Fuel tank capacity	L (US gal, Imp gal)	60 (15.9, 13.2)
Oil tank quantity	L (US gal, Imp gal)	5.5 (1.5, 1.2)

*1 Pump Octane Number = (Motor Octane Number + Research Octane Number)/2
*2 Research Octane Number
*3 YAMALUBE 2-W has been developed for this watercraft and it is available at a Yamaha dealer.

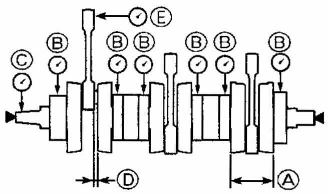
CAUTION:

Use only YAMALUBE 2-W oil. Using another oil can seriously damage the catalytic converter and other engine components.

MAINTENANCE SPECIFICATIONS
ENGINE

Item	Unit	Model
		GP1300R
Cylinder head		
Warpage limit	mm (in)	0.10 (0.004)
Minimum compression pressure*1	kPa (kgf/cm², psi)	640 (6.4, 91)
Cylinders 		
Bore size	mm (in)	84.000–84.018 (3.3071–3.3078)
Taper limit	mm (in)	0.080 (0.0032)
Out-of-round limit	mm (in)	0.050 (0.0020)
Wear limit	mm (in)	84.100 (3.3110)
Pistons		
Piston diameter 	mm (in)	Red: 83.889–83.892 (3.3027–3.3028) Orange: 83.893–83.896 (3.3029–3.3030) Green: 83.897–83.900 (3.3030–3.3031) Purple: 83.901–83.904 (3.3032–3.3033)
Measuring point*	mm (in)	11 (0.43)
Piston-to-cylinder clearance	mm (in)	0.110–0.115 (0.0043–0.0045)
Wear limit	mm (in)	0.165 (0.0065)
Piston pin boss inside diameter	mm (in)	22.008–22.020 (0.8665–0.8669)
Piston rings 		
Top		
Type		Keystone
Dimension (B)	mm (in)	1.47–1.49 (0.058–0.059)
Dimension (T)	mm (in)	3.0–3.2 (0.118–0.126)
End gap	mm (in)	0.45–0.60 (0.018–0.024)
Ring groove clearance	mm (in)	0.020–0.070 (0.0008–0.0028)
2nd		
Type		Keystone
Dimension (B)	mm (in)	1.47–1.49 (0.058–0.059)
Dimension (T)	mm (in)	3.0–3.2 (0.118–0.126)
End gap	mm (in)	0.45–0.60 (0.018–0.024)
Ring groove clearance	mm (in)	0.020–0.070 (0.0008–0.0028)
Piston pins		
Outside diameter	mm (in)	21.995–22.000 (0.8659–0.8661)
Wear limit	mm (in)	21.990 (0.8657)
Connecting rod		
Small end inside diameter	mm (in)	26.995–27.008 (1.0628–1.0633)

*1 Measuring conditions:
Engine temperature 48 °C (118 °F), wide open throttle, with spark plugs removed from all cylinders.
The figures are for reference only.

Item	Unit	Model
		GP1300R
Crankshaft assembly		
Crank width Ⓐ	mm (in)	72.95–73.00 (2.872–2.874)
Deflection limit Ⓑ	mm (in)	0.05 (0.002)
Deflection limit Ⓒ	mm (in)	0.15 (0.006)
Big end side clearance Ⓓ	mm (in)	0.250–0.750 (0.0098–0.0295)
Maximum small end axial play Ⓔ	mm (in)	2.000 (0.0787)
		
Throttle body		
Model/quantity		60TA/3
ID mark		60T00
Trolling speed	r/min	1,250–1,450
Reed valves		
Thickness	mm (in)	0.6 (0.024)
Reed valve stopper height	mm (in)	10.5–10.9 (0.413–0.429)
Reed valve warpage limit	mm (in)	0.2 (0.079)
Fuel pump		
Pump type		Electrical
Output pressure	kPa (kgf/cm^2, psi)	320.8–327.2 (3.21–3.27, 45.62–46.53)
Coupling clearance		
Vertical	mm (in)	0–0.5 (0–0.020)
Horizontal	mm (in)	2–4 (0.079–0.157)

JET PUMP UNIT

Item	Unit	Model
		GP1300R
Jet pump		
Impeller material		Stainless steel
Number of impeller blades		3
Impeller pitch angle	Degree	15.0
Impeller clearance	mm (in)	0.35–0.45 (0.0138–0.0177)
Impeller clearance limit	mm (in)	0.6 (0.024)
Drive shaft runout limit	mm (in)	0.30 (0.0118)
Nozzle diameter	mm (in)	85.0–85.6 (3.35–3.37)

HULL AND HOOD

Item	Unit	Model
		GP1300R
Free play		
Throttle lever free play	mm (in)	4–7 (0.16–0.28)

ELECTRICAL

Item	Unit	Model
		GP1300R
Battery		
Type		Fluid
Voltage, capacity	V, Ah	12, 19
Specific gravity		1.27
ECM unit (B/R – Ground for cylinder #1) (B/W – Ground for cylinder #2) (B/Y – Ground for cylinder #3)		
Output peak voltage lower limit		
at cranking	V	0.8
at 2,000 r/min	V	174
at 3,500 r/min	V	156
Stator		
Pickup coil (W/R, W/B, W/Y – B)		
Output peak voltage		
at cranking 1	V	6.0
at cranking 2	V	6.0
at 2,000 r/min	V	24
at 3,500 r/min	V	40
Pickup coil resistance 1 (W/R – B)	Ω	459–561
Pickup coil resistance 2 (W/B – B)	Ω	459–561
Pickup coil resistance 3 (W/Y – B)	Ω	459–561
Lighting coil (G – G)		
Output peak voltage		
at cranking 1	V	9.0
at cranking 2	V	7.5
at 2,000 r/min	V	12.5
at 3,500 r/min	V	12.5
Lighting coil resistance (G – G)	Ω	0.54–0.66

Cranking 1: unloaded
Cranking 2: loaded

Item	Unit	Model GP1300R
Ignition coil		
Minimum spark gap	mm (in)	10–11 (0.39–0.43)
Primary coil resistance (B/W – body)	Ω	0.26–0.36
Secondary coil resistance (B/W – spark plug lead terminal)	kΩ	3.5–4.7
Spark plug lead resistance		
#1	kΩ	6.1–14.3
#2	kΩ	4.5–10.9
#3	kΩ	3.3–8.2
Rectifier/regulator (R – B)		
Output peak voltage (unloaded)		
at 3,500 r/min	V	14.5
Starter motor		
Type		Bendix
Output	kW	0.8
Rating	Seconds	30
Brush length	mm (in)	12.5 (0.49)
Wear limit	mm (in)	6.5 (0.26)
Commutator undercut	mm (in)	0.7 (0.03)
Limit	mm (in)	0.2 (0.01)
Commutator diameter	mm (in)	28.0 (1.10)
Limit	mm (in)	27.0 (1.06)
Starter relay		
Rating	Seconds	30
Engine temperature sensor		
Engine temperature sensor resistance (B/Y – B/Y)		
at 20 °C (68 °F)	kΩ	54.2–69.0
at 100 °C (212 °F)	kΩ	3.12–3.48
Exhaust temperature sensor resistance		
at 300 °C (572 °F)	kΩ	73–241
at 600 °C (1,112 °F)	kΩ	0.86–1.58
at 900 °C (1,652 °F)	Ω	64–90
Cooling water temperature sensor resistance		
at 0 °C (32 °F)	kΩ	24.0–37.1
at 100 °C (212 °F)	kΩ	0.87–1.18
at 200 °C (392 °F)	Ω	104–153

Item	Unit	Model
		GP1300R
Speed sensor		
Output voltage (on pulse)	V	11.6
Output pulse/one full turn		2
Throttle position sensor		
Output voltage (P – B/O)		
at trolling speed	V	0.793–0.807
Fuel sender		
Fuel sender resistance		
Position A	Ω	133.5–136.5
Position B	Ω	5–7
Fuel injector		
Fuel injector resistance*1	Ω	13.8
Oil level sensor		
Oil level sensor resistance		
Position A	Ω	292–308
Position B	Ω	97–103
Position C	Ω	0–3
Fuse		
Rating		
Main	V/A	12/20
Multifunction meter	V/A	12/3
Electrical bilge pump	V/A	12/3

*1 The figures are for reference only.

TIGHTENING TORQUES
SPECIFIED TORQUES

Part to be tightened		Part name	Thread size	Q'ty	Tightening torques			Remarks
					N•m	kgf•m	ft•lb	
Fuel system								
Strap/fuel tank/oil tank		Bolt	M8	4	16	1.6	11	LT 572
Oil filler hose screw clamp		—	—	1	0.6	0.06	0.4	
Retainer/fuel pump module	1st	Nut	—	9	3.2	0.32	2.3	
	2nd				6.4	0.64	4.6	
Fuel filler hose screw clamp		—	—	2	3.7	0.37	2.7	
Cap screw clamp (fuel tank)		—	—	1	1.3	0.13	0.9	
Intake silencer screw clamp		—	—	1	2.5	0.25	1.8	
Intake silencer pipe screw clamp		—	—	2	2.5	0.25	1.8	
Intake duct	1st	Bolt	M8	1	9.0	0.9	6.5	LT 242
	2nd				18	1.8	13	
Intake duct	1st	Bolt	M8	2	9.0	0.9	6.5	LT 242
	2nd				18	1.8	13	
Throttle bodies assembly	1st	Bolt	M8	2	9.0	0.9	6.5	LT 242
	2nd				18	1.8	13	
Throttle cable locknut and adjuster (throttle bodies end)		—	—	1	11	1.1	8.0	
Intake silencer case cover		Tapping screw	ø6	13	1.8	0.18	1.3	
Flame arrester		Screw	M5	6	0.8	0.08	0.6	
Fuel rail		Bolt	M6	3	8.8	0.88	6.4	
Oil pump cable	1st	Bolt	M5	1	2.2	0.22	1.6	LT 572
	2nd				4.4	0.44	3.2	
Oil pump cable locknut and adjuster		—	—	1	11	1.1	8.0	
Bleed hose stay		Bolt	M6	1	7.6	0.76	5.5	
Oil pump	1st	Bolt	M6	2	3.8	0.38	2.7	
	2nd				7.6	0.76	5.5	
Air bleed screw		—	—	1	3.4	0.34	2.5	
Engine								
Spark plug		—	—	3	25	2.5	18	
Muffler cover		Bolt	M6	3	12	1.2	8.7	LT 242
Outer exhaust joint screw clamp		—	—	2	2.5	0.25	1.8	
Inner exhaust joint screw clamp		—	—	2	1.5	0.15	1.1	
Exhaust joint screw clamp		—	—	2	2.5	0.25	1.8	
Eye		Nut	M10	2	39	3.9	28	LT 271
Eye		Bolt	M10	4	39	3.9	28	LT 271
Muffler stay		Bolt	M10	2	39	3.9	28	LT 271
Muffler stay 2		Bolt	M10	2	39	3.9	28	LT 271
Muffler		Bolt	M10	1	39	3.9	28	LT 271
Exhaust temperature sensor		—	—	1	39	3.9	28	LT 572
Cooling water temperature sensor		—	—	1	20	2.0	14	LT 572

Part to be tightened		Part name	Thread size	Q'ty	Tightening torques			Remarks
					N•m	kgf•m	ft•lb	
Muffler stay	1st	Bolt	M10	2	15	1.5	11	LT 271
	2nd				39	3.9	28	
Cover/catalytic converter housing/catalytic converter	1st	Bolt	M8	6	15	1.5	11	LT 271
	2nd				33	3.3	24	
Mixing joint	1st	Bolt	M8	6	11	1.1	8.0	LT 271
	2nd				22	2.2	16	
Exhaust chamber assembly		Bolt	M10	4	39	3.9	28	LT 271
Exhaust chamber stay/ exhaust chamber assembly		Bolt	M10	2	39	3.9	28	LT 271
Exhaust chamber joint		Bolt	M10	6	39	3.9	28	LT 271
Coupling cover		Bolt	M6	1	7.9	0.79	5.7	LT 572
Engine unit		Bolt	M8	4	17	1.7	12	LT 572
Exhaust manifold	1st	Bolt	M10	10	22	2.2	16	LT 271
	2nd				39	3.9	28	
	1st	Nut	M10	2	22	2.2	16	
	2nd				39	3.9	28	
Cooling water joint		Bolt	M6	6	12	1.2	8.7	LT 242
Throttle bodies bracket 1, 2/ throttle bodies joint/balance plate/plate/reed valve assembly	1st	Bolt	M6	4	3.8	0.38	2.7	LT 572
	2nd				7.6	0.76	5.5	
Throttle bodies joint/ balance plate/plate/reed valve assembly	1st	Bolt	M6	14	3.8	0.38	2.7	LT 572
	2nd				7.6	0.76	5.5	
Balance plate/plate/reed valve assembly	1st	Bolt	M6	4	3.8	0.38	2.7	LT 572
	2nd				7.6	0.76	5.5	
Valve stopper/reed valve		Screw	M3	24	1.0	0.1	0.7	LT 242
Throttle bracket		Nut	—	2	16	1.6	11	
Ground lead	1st	Bolt	M6	1	3.8	0.38	2.7	
	2nd				7.6	0.76	5.5	
Exhaust chamber stay/ cylinder head	1st	Bolt	M8	2	15	1.5	11	LT 572
	2nd				35	3.5	25	
Cylinder head	1st	Bolt	M8	16	22	2.2	16	LT 572
	2nd				22	2.2	16	
	3rd				35	3.5	25	
Anode		Screw	M5	2	4.4	0.44	3.2	
Engine temperature sensor		—	—	1	15	1.5	11	
Cylinder	1st	Bolt	M10	12	22	2.2	16	LT 572
	2nd				39	3.9	28	
Generator cover	1st	Bolt	M10	7	15	1.5	11	LT 271
	2nd				50	5.0	36	
Generator cover/ground lead	1st	Bolt	M10	1	15	1.5	11	
	2nd				50	5.0	36	
Exhaust chamber bracket		Bolt	M10	4	39	3.9	28	LT 271

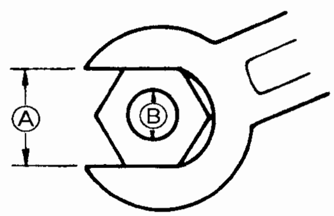
Part to be tightened		Part name	Thread size	Q'ty	Tightening torques			Remarks
					N•m	kgf•m	ft•lb	
Cable holder		Bolt	M6	2	14	1.4	10	242
Pickup coil		Bolt	M5	6	4.9	0.49	3.5	242
Lighting coil		Bolt	M6	3	14	1.4	10	242
Drive coupling		Drive coupling	—	1	36	3.6	25	572
Flywheel magneto		Bolt	M10	1	74	7.4	53	E
Starter motor/negative battery lead	1st	Bolt	M8	1	9.0	0.9	6.5	A
	2nd				18	1.8	13	
Starter motor	1st	Bolt	M8	1	9.0	0.9	6.5	
	2nd				18	1.8	13	
Mount bracket	1st	Bolt	M8	6	15	1.5	11	271
	2nd				27	2.7	19	
Upper crankcase	1st	Bolt	M8	17	15	1.5	11	271
	2nd				27	2.7	19	
			M6	10	11	1.1	8.0	
Jet pump unit								
Steering cable joint		Nut	—	1	6.8	0.68	4.9	242
Ride plate		Bolt	M8	4	17	1.7	12	572
Intake duct		Bolt	M8	4	17	1.7	12	572
Intake grate		Bolt	M6	4	7.6	0.76	5.5	572
Speed sensor		Screw	M5	4	3.7	0.37	2.7	242
Jet pump unit assembly/impeller housing 2		Bolt	M10	4	40	4.0	29	572
			M6	1	7.8	0.78	5.6	
Nozzle ring		Bolt	M8	2	15	1.5	11	271
Jet thrust nozzle		Bolt	M8	2	15	1.5	11	271
Spout hose screw clamp		—	—	1	1.2	0.12	0.9	
Nozzle/impeller duct assembly		Bolt	M10	4	40	4.0	29	572
Water inlet cover/water inlet strainer		Bolt	M6	4	6.6	0.66	4.8	572
Drive shaft nut		Nut	—	1	74	7.4	53	
Impeller (left-hand threads)		Impeller	M22	1	75	7.5	54	572
Transom plate		Nut	—	4	26	2.6	19	
Intermediate housing		Bolt	M8	3	17	1.7	12	572
Driven coupling		Driven coupling	M24	1	36	3.6	25	572
Grease nipple		Nipple	—	1	5.4	0.54	3.9	572
Hull and hood								
Handlebar cover		Screw	M6	4	1.1	0.11	0.8	
Handlebar cover stay		Screw	M6	4	2.9	0.29	2.1	
Upper handlebar holder/lower handlebar holder		Bolt	M8	4	16	1.6	11	
QSTS converter		Nut	M6	2	5.4	0.54	3.9	
QSTS cable 1, 2 locknut		—	—	2	16	1.6	11	
Throttle lever assembly		Screw	M5	2	3.4	0.34	2.5	

Part to be tightened	Part name	Thread size	Q'ty	Tightening torques			Remarks
				N•m	kgf•m	ft•lb	
Handlebar switch assembly	Screw	M5	2	3.4	0.34	2.5	
QSTS grip assembly	Screw	M6	1	3.4	0.34	2.5	
Grip end	Bolt	M5	2	1.2	0.12	0.9	
QSTS cable housing	Screw	M6	1	3.4	0.34	2.5	
Plate/steering column assembly	Nut	M8	2	16	1.6	11	
Steering column assembly	Nut	M8	2	16	1.6	11	
Steering arm	Nut	M8	1	16	1.6	11	
Steering sensor	Bolt	M8	2	16	1.6	11	LT 242
Steering cable ball joint	Nut	M6	1	6.8	0.68	4.9	
QSTS cable locknut (nozzle ring side)	—	—	1	3.8	0.38	2.7	
QSTS cable	Nut	—	1	5.9	0.59	4.3	
QSTS cable end	Nut	M6	1	3.8	0.38	2.7	
Steering cable locknut (jet thrust nozzle end)	—	—	1	6.8	0.68	4.9	
Steering cable	Nut	—	1	5.9	0.59	4.3	
Steering cable holder	Bolt	M6	1	6.4	0.64	4.6	
Speed sensor lead	Nut	—	1	5.9	0.59	4.3	
Hinge assembly	Bolt	M6	2	12	1.2	8.7	
Visor	Screw	M5	8	1.0	0.1	0.7	
Hood lock	Bolt	M6	2	5.4	0.54	3.9	
Hinge assembly	Nut	M8	2	16	1.6	11	
Steering console cover assembly	Nut	M6	2	5.4	0.54	3.9	
	Bolt	M6	4	2.9	0.29	2.1	
	Screw	M5	2	2.0	0.2	1.4	
	Nut	M8	2	16	1.6	11	
Multifunction meter	Nut	M5	2	1.8	0.18	1.3	
Steering console cover	Screw	M6	4	2.9	0.29	2.1	
Steering console cover	Screw	M5	4	1.3	0.13	0.9	
Steering cable bracket	Bolt	M6	1	6.4	0.64	4.6	
Buzzer bracket/deck	Bolt	M6	3	6.4	0.64	4.6	
Hood lock assembly	Nut	M6	2	6.4	0.64	4.6	
Seat lock assembly	Bolt	M6	2	6.4	0.64	4.6	LT 572
Bracket/deck	Nut	M10	1	26	2.6	19	
Bracket/deck	Bolt	M8	2	5.2	0.52	3.8	
Handgrip	Nut	M8	2	5.2	0.52	3.8	
Seat bracket	Nut	M8	2	15	1.5	11	
Battery box/stay	Nut	M6	2	8.9	0.89	6.4	
Battery box	Nut	M8	2	13	1.3	9.4	
Battery box	Bolt	M8	1	13	1.3	9.4	
Battery box/stay	Nut	M8	2	13	1.3	9.4	
Extension bolt	—	M6	1	6.4	0.64	4.6	
Exhaust outlet	Bolt	M6	3	6.4	0.64	4.6	
Hose screw clamp	—	—	3	3.7	0.37	2.7	

TIGHTENING TORQUES

Part to be tightened	Part name	Thread size	Q'ty	Tightening torques			Remarks
				N•m	kgf•m	ft•lb	
Sponson	Bolt	M8	6	16	1.6	11	
Spout	Nut	M24	1	5.4	0.54	3.9	
Rope hole	Nut	M24	2	5.4	0.54	3.9	
Bow eye	Bolt	M6	2	13	1.3	9.4	
Flap	Bolt	M6	8	7.6	0.76	5.5	
Drain plug/packing	Nut	—	4	2.0	0.2	1.4	
Engine mount	Bolt	M8	8	17	1.7	12	LT 271
Engine damper	Bolt	M6	4	6.4	0.64	4.6	
Electrical							
Cover	Tapping screw	ø6	11	4.9	0.49	3.5	
Lead retainer	Tapping screw	ø6	2	4.9	0.49	3.5	
Positive battery lead	Bolt	M6	1	3.4	0.34	2.5	
Starter motor lead	Bolt	M6	1	3.4	0.34	2.5	
Rectifier/regulator	Tapping screw	ø6	2	3.9	0.39	2.8	
Coupler bracket	Tapping screw	ø6	2	3.4	0.34	2.5	
Wire harness retainer	Tapping screw	ø6	2	4.9	0.49	3.5	
Ignition coil #1, # 2, #3	Tapping screw	ø6	6	3.9	0.39	2.8	
Fuse holder stay	Tapping screw	ø6	1	3.4	0.34	2.5	
Main and fuel pump relay	Tapping screw	ø6	1	3.9	0.39	2.8	
Ground leads	Bolt	M6	2	7.6	0.76	5.5	
ECM	Nut	—	2	5.4	0.54	3.9	
Slant detection switch	Nut	—	2	5.4	0.54	3.9	
Nut/spring washer/washer (starter motor lead terminal)	Nut	—	1	8.8	0.88	6.4	
Starter motor rear cover/starter motor yoke	Bolt	M5	2	6.4	0.64	4.6	

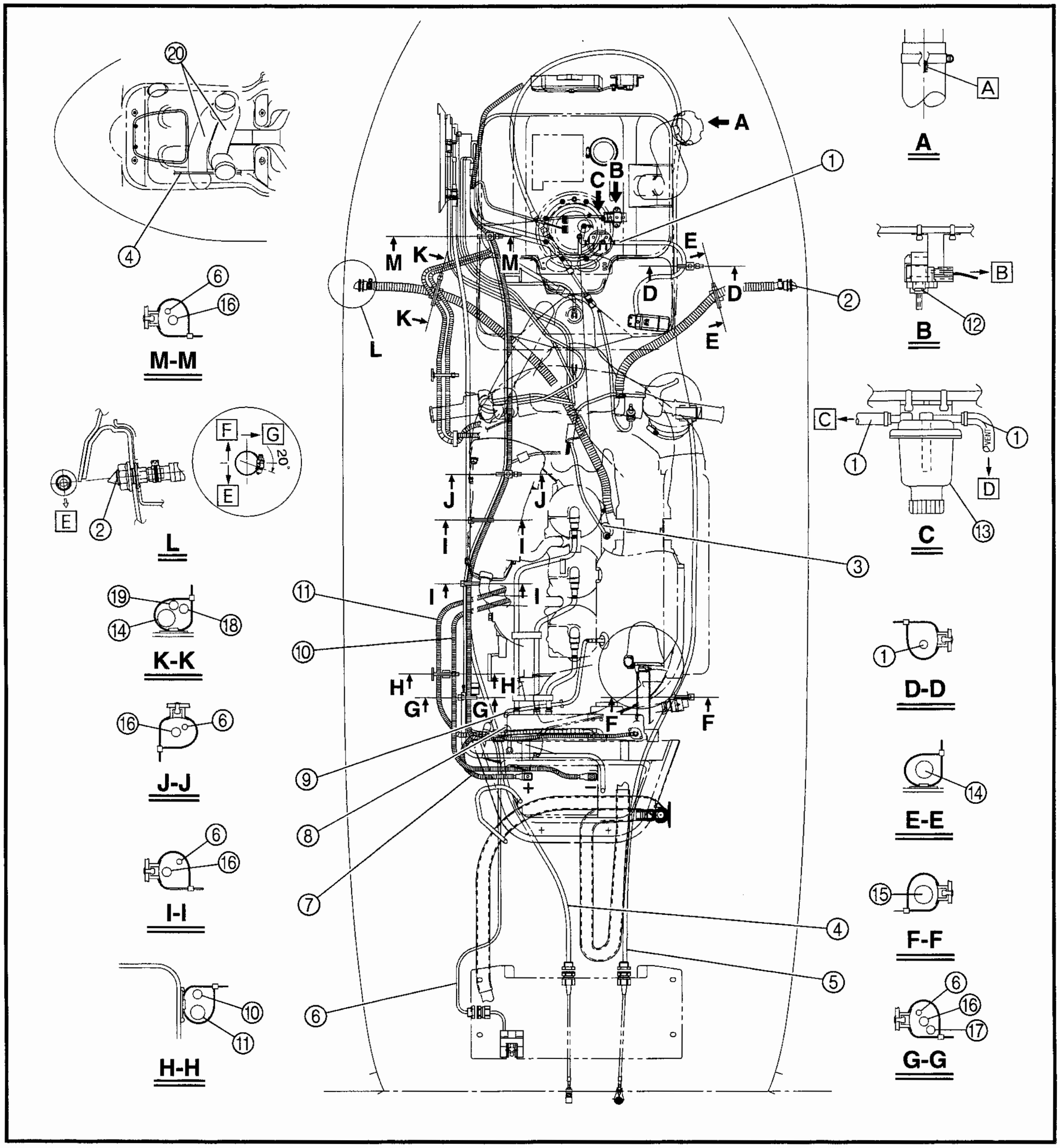
Nut Ⓐ	Bolt Ⓑ	General torque specifications		
		N•m	kgf•m	ft•lb
8 mm	M5	5.0	0.5	3.6
10 mm	M6	8.0	0.8	5.8
12 mm	M8	18	1.8	13
14 mm	M10	36	3.6	25
17 mm	M12	43	4.3	31



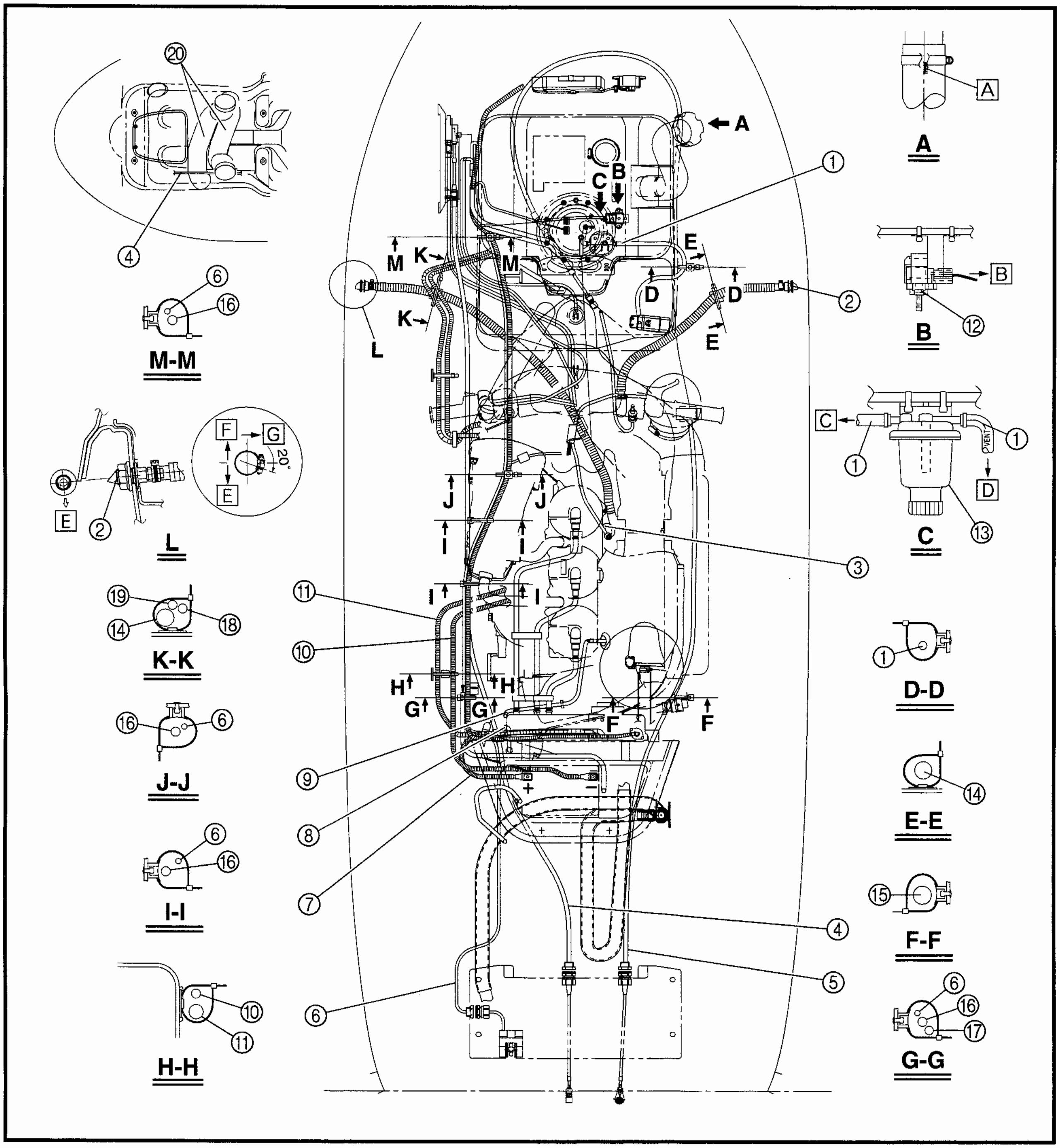
GENERAL TORQUE

This chart specifies tightening torques for standard fasteners with a standard ISO thread pitch. Tightening torque specifications for special components or assemblies are provided in applicable sections of this manual. To avoid warpage, tighten multi-fastener assemblies in a crisscross fashion and progressive stages until the specified tightening torque is reached. Unless otherwise specified, tightening torque specifications require clean, dry threads.
Components should be at room temperature.

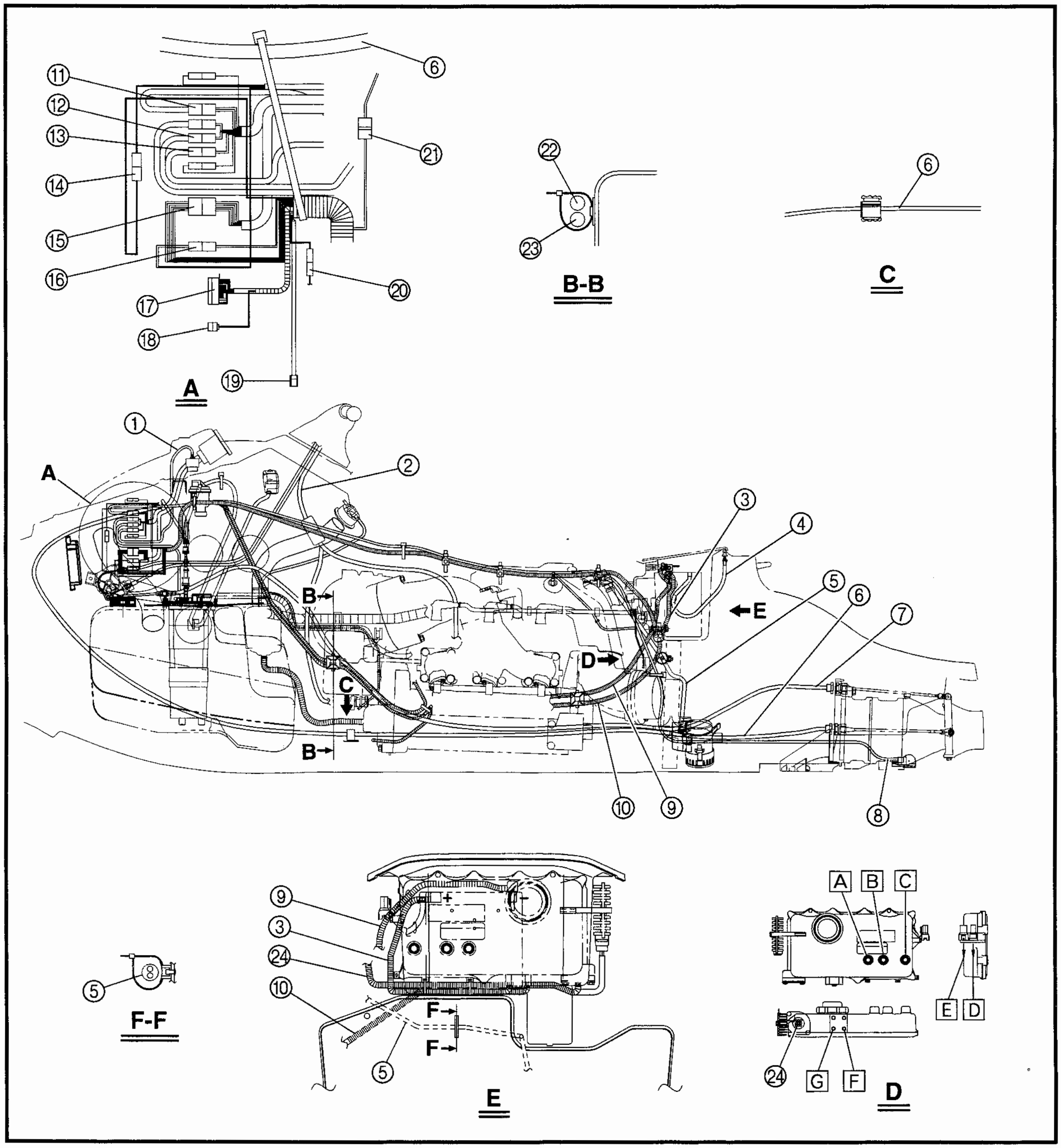
CABLE AND HOSE ROUTING



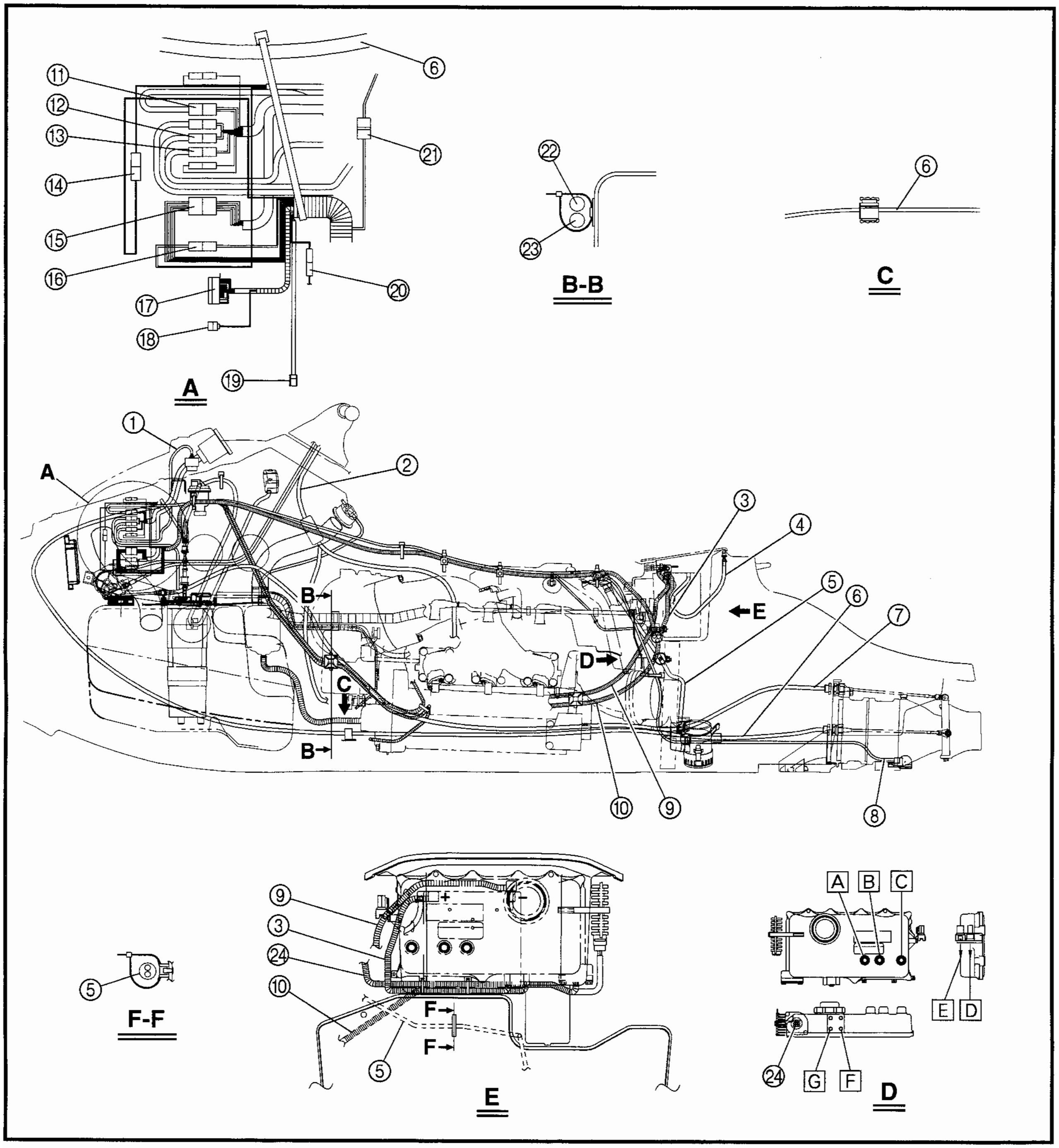
① Fuel tank breather hose
② Cooling water pilot outlet
③ Throttle cable
④ QSTS cable
⑤ Steering cable
⑥ Speed sensor lead
⑦ Positive battery lead
⑧ Cooling water temperature sensor lead
⑨ Exhaust temperature sensor lead
⑩ Negative battery lead
⑪ Starter motor lead
⑫ Sensor assembly (intake air temperature and atmospheric pressure)
⑬ Water separator
⑭ Cooling water pilot outlet hose
⑮ Cooling water outlet hose
⑯ Wire harness
⑰ Electrical bilge pump lead
⑱ Wire harness (generator)
⑲ Wire harness (throttle bodies)
⑳ Ventilation hose



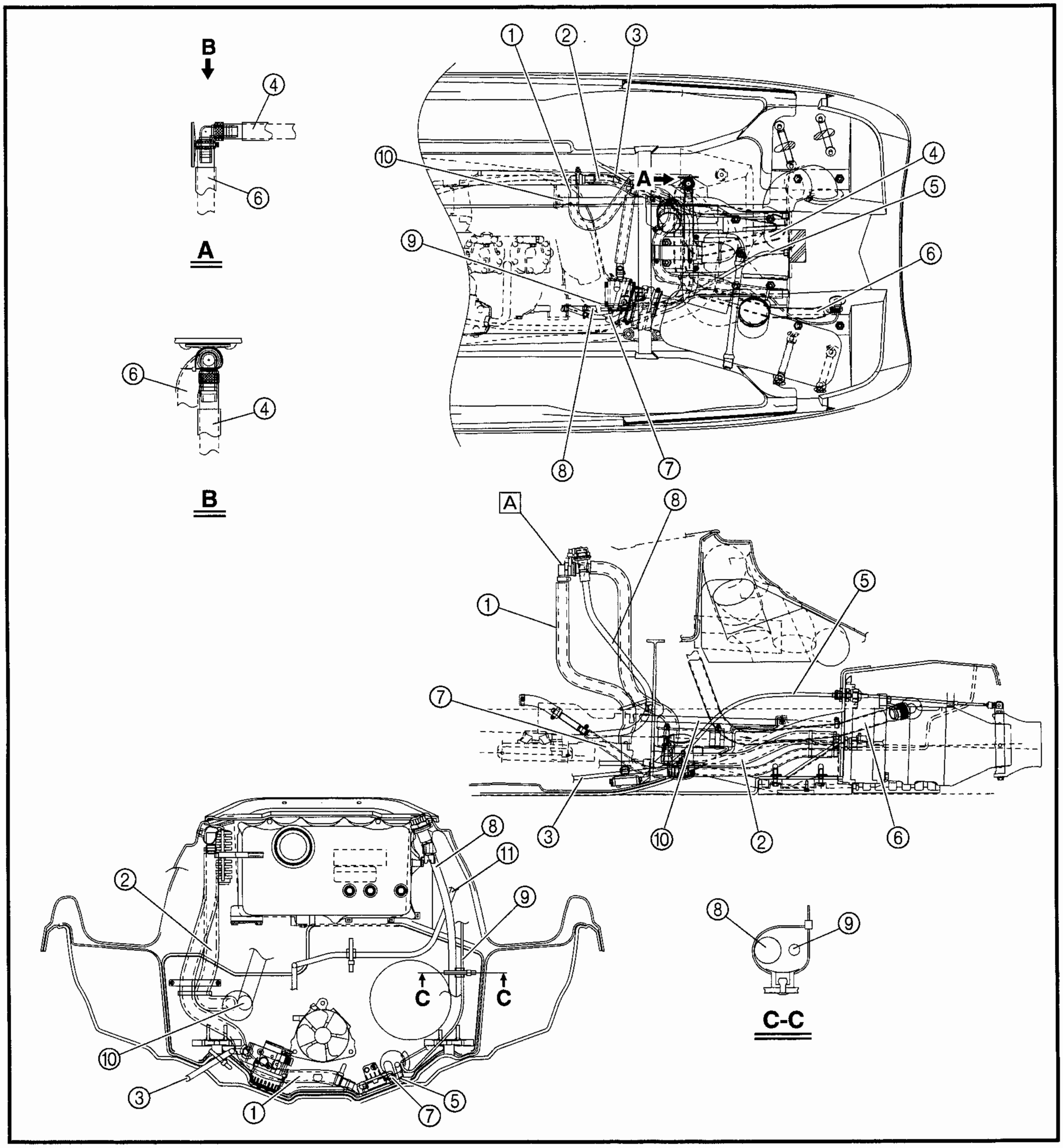
[A] Align the parting line on the fuel filler neck with the lot mark on the fuel filler hose.
[B] To wire harness
[C] To ventilation socket
[D] To fuel tank
[E] Down
[F] Up
[G] Bow



① Buzzer lead
② Throttle cable
③ Positive battery lead
④ Battery breather hose
⑤ Electrical bilge pump lead
⑥ Steering cable
⑦ QSTS cable
⑧ Speed sensor lead
⑨ Negative battery lead
⑩ Starter motor lead
⑪ Speed sensor coupler
⑫ Oil level sensor coupler
⑬ Buzzer coupler
⑭ Engine stop switch coupler
⑮ Multifunction meter coupler
⑯ Start switch coupler
⑰ ECM coupler
⑱ Slant detection switch
⑲ Fuel pump coupler
⑳ Sensor assembly (intake air temperature and atmospheric pressure)
㉑ Steering sensor coupler
㉒ Wire harness (generator)
㉓ Wire harness (throttle bodies)
㉔ Wire harness

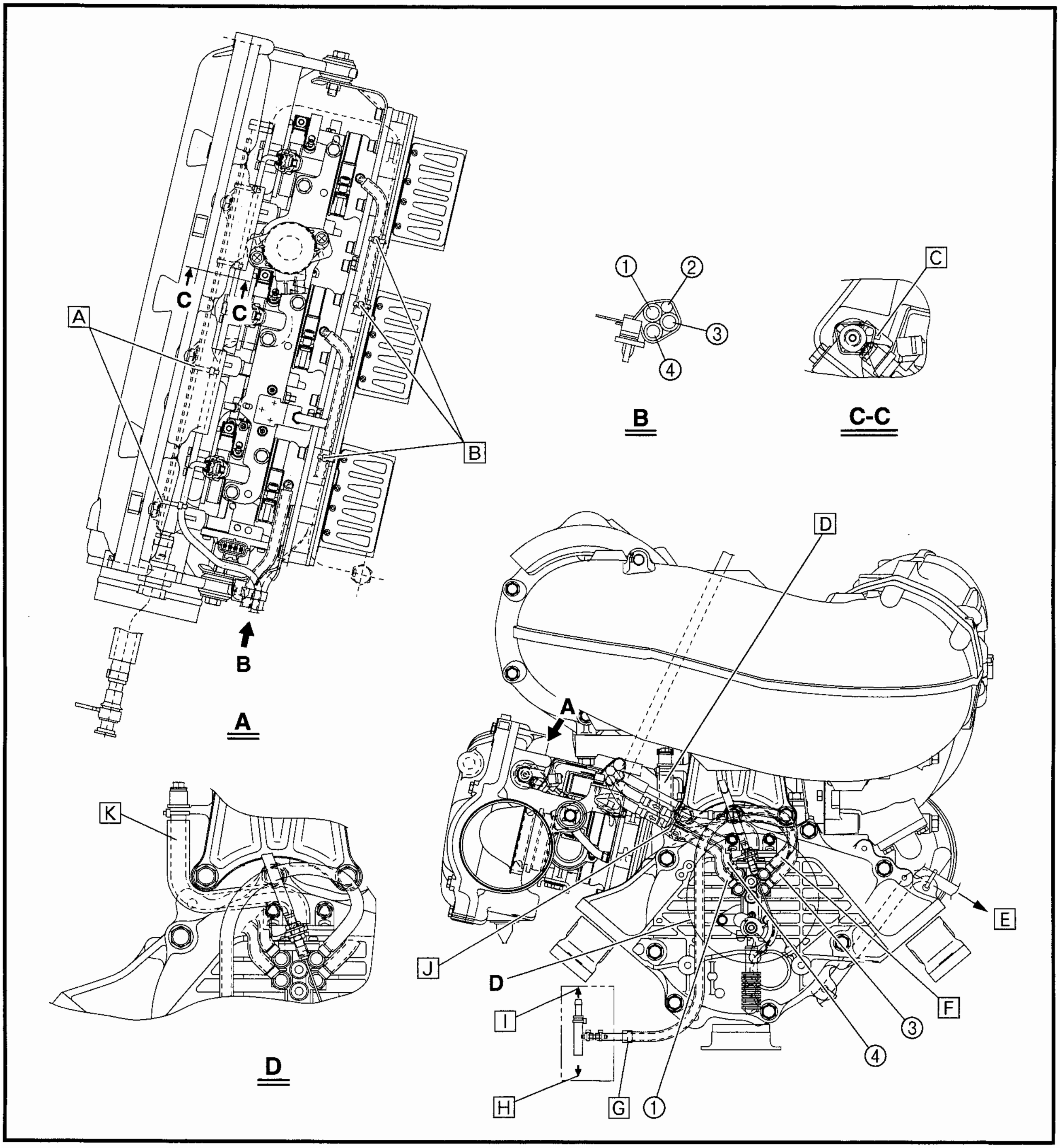


A To cylinder #3
B To cylinder #2
C To cylinder #1
D Cooling water temperature sensor
E Exhaust temperature sensor
F To positive battery terminal
G To starter motor



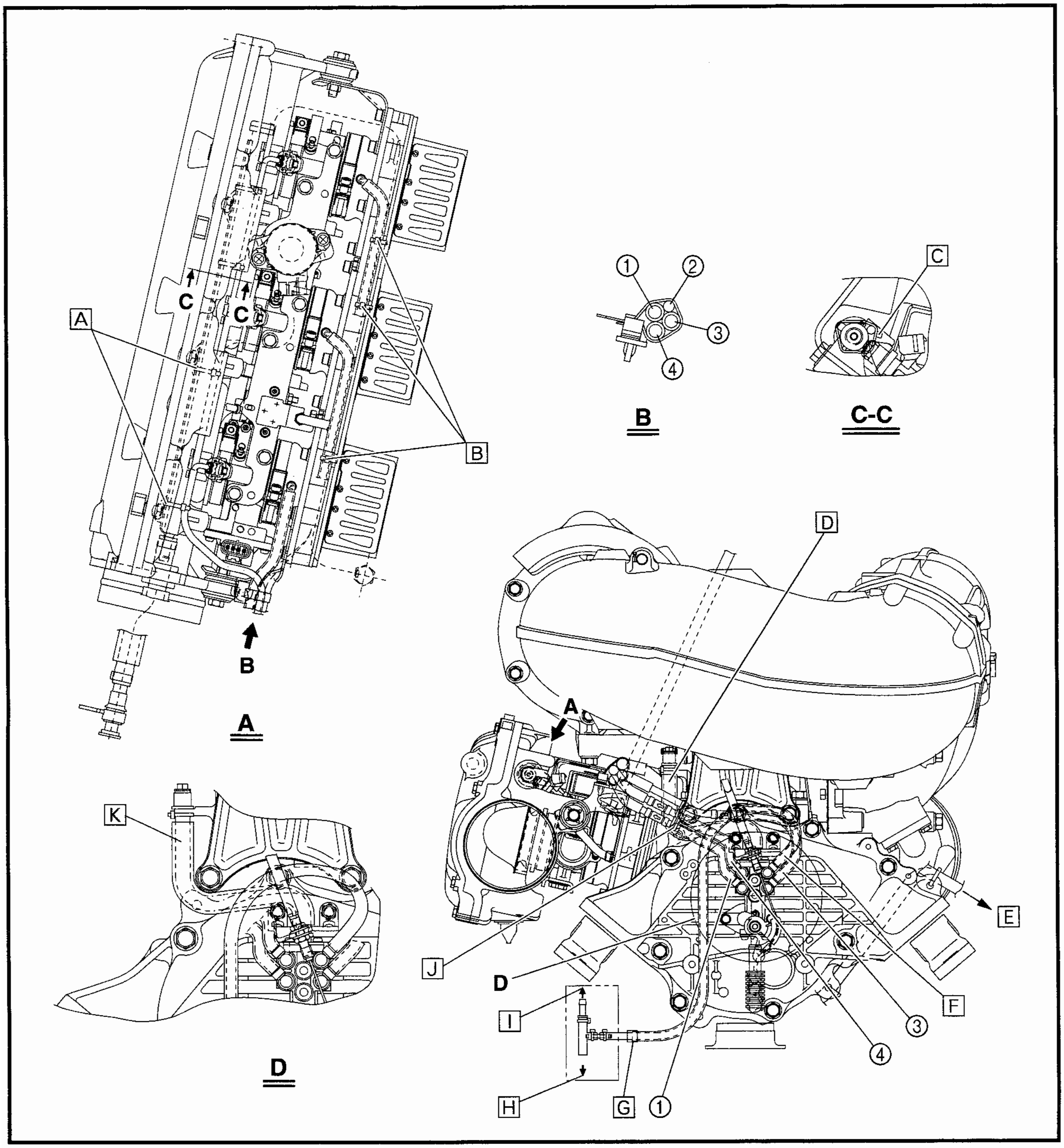
① Bilge hose 1
② Bilge hose 2
③ Steering cable
④ Bilge hose 3
⑤ QSTS cable
⑥ Bilge hose 4
⑦ Cooling water hose (cooling water inlet)
⑧ Flushing hose
⑨ Speed sensor lead
⑩ Cooling water hose (cooling water outlet)
⑪ Electrical bilge pump lead

[A] Contact the corrugated tube (bilge hose 1) to the hose screw clamp.

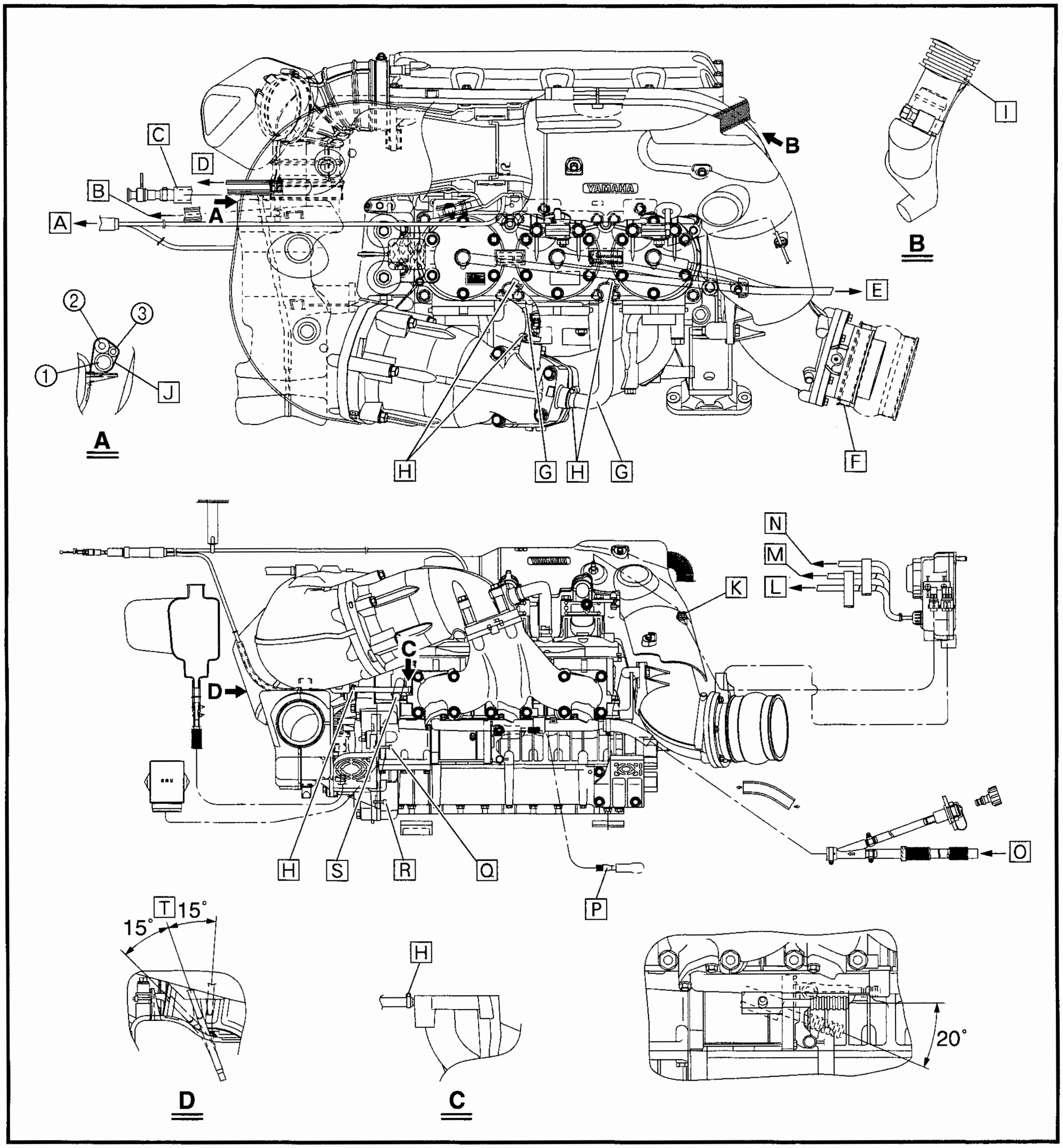


① Oil delivery hose #1
② Sub-wire harness
③ Oil delivery hose #3
④ Oil delivery hose #2

[A] Pass the plastic tie through the holes of the rib on the fuel rail.
[B] Fasten oil delivery hoses #2 and #3 and the engine temperature sensor lead with a plastic tie.
[C] Fasten the sub-wire harness with the plastic tie on the rib of the fuel rail. Be sure to position the plastic tie so that the fastener is visible from the outside.
[D] Pass the oil bleed hose on the inside of the oil pump cable.
[E] To ECM
[F] Pass the oil return hose on the outside of the oil pump cable.

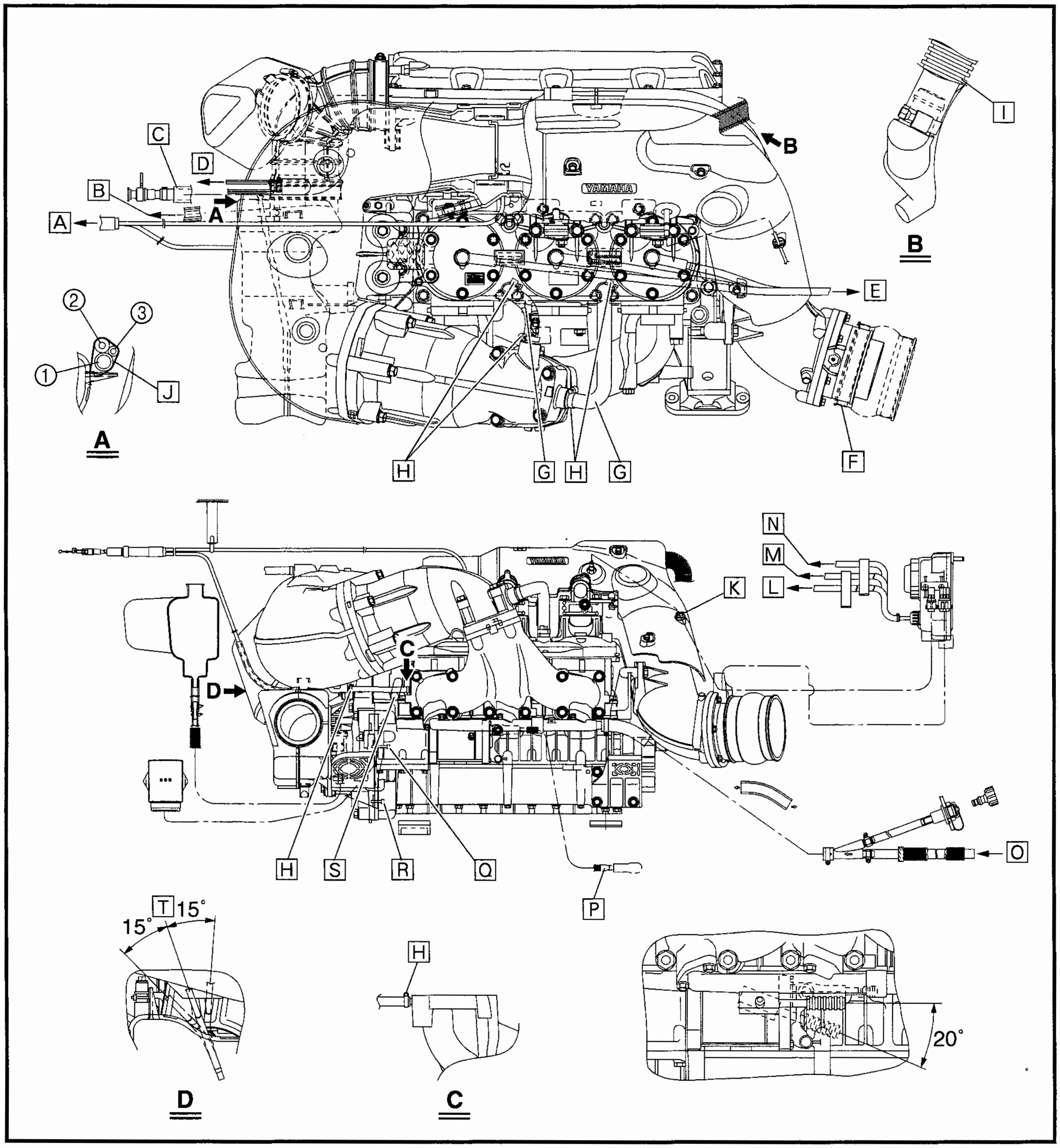


G Push the corrugated tube toward the oil pump, and then tape it.
H To oil tank
I To check valve
J Install the oil hoses into the hose holders so that the holders do not cover the check valve clips.
K Pass the bleed hose under the exhaust chamber bracket. Be sure to install the L-shaped bleed hose toward the oil pump.



① Cooling water hose (cooling water pilot outlet on port side)
② Fuel hose
③ Oil return hose

[A] To throttle lever
[B] To cooling water pilot outlet on port side
[C] When fastening the corrugated tube of the fuel hose to the intake silencer, slide it toward the fuel pump, and then tighten it with a plastic tie.
[D] To cooling water pilot outlet on starboard side
[E] To electrical box
[F] Install the exhaust joint so that it contacts the stoppers on the muffler assembly.
[G] Face the red mark end of the cooling hose toward the cylinder head cover, and then install the hose.
[H] Install the hose screw clamps in the direction shown.



I Contact the corrugated tube to the hose screw clamp (muffler assembly end).
J Strongly pull the plastic tie.
K Fasten the exhaust temperature sensor lead.
L To cylinder #1
M To cylinder #2
N To cylinder #3
O Cooling water inlet
P Install the white tape end of the negative battery lead to the battery.
Q Fasten the sub-wire harness and wire harness (generator).
R Fasten the wire harness (generator).
S Route the sub-wire harness under the cooling water hose.
T Install the oil pump cable to the angle shown in the illustration.

MAINTENANCE INTERVAL CHART

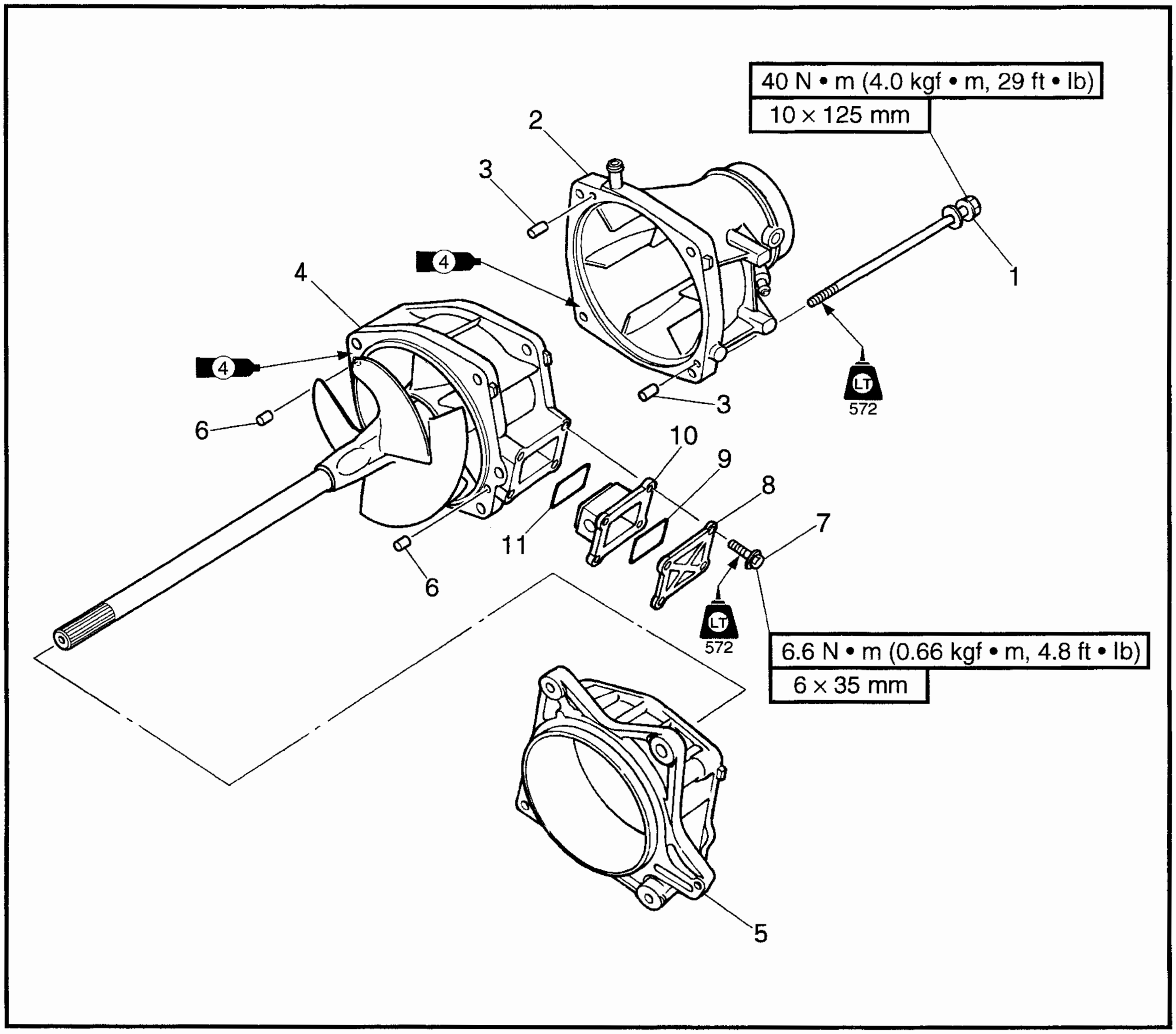
The following chart gives general guidelines for periodic maintenance. However, depending on your operating conditions maintenance may need to be performed more frequently.

ITEM	MAINTENANCE INTERVAL	INITIAL			THEREAFTER EVERY	
		10 hours	50 hours	100 hours	100 hours	200 hours
			6 months	12 months	12 months	24 months
Spark plug	Inspect, clean, adjust	O	O	O	O	
Lubrication points	Lubricate			O	O	
Intermediate housing	Lubricate	O *1		O *2	O *2	
Fuel system	Inspect			O	O	
Fuel tank	Clean			O	O	
Oil injection system	Inspect, clean	O				O
Throttle shaft	Inspect			O	O	
Cooling water passages	Flush	O *3				
Water inlet strainer	Inspect, clean			O	O	
Bilge strainer	Clean			O	O	
Electric bilge pump strainer	Inspect, clean			O	O	
Impeller	Inspect			O	O	
Jet thrust nozzle angle	Inspect, adjust			O	O	
QSTS mechanism	Inspect, adjust	O		O	O	
Throttle cable	Inspect, adjust	O		O	O	
Stern drain plugs	Inspect, replace			O	O	
Battery	Inspect			O	O	
Rubber coupling	Inspect					O
Engine mount	Inspect					O
Nuts and bolts	Inspect	O		O	O	

*1 Grease quantity: 33.0–35.0 cm^3 (1.11–1.18 oz)
*2 Grease quantity: 6.0–8.0 cm^3 (0.20–0.27 oz)
*3 After each use

3

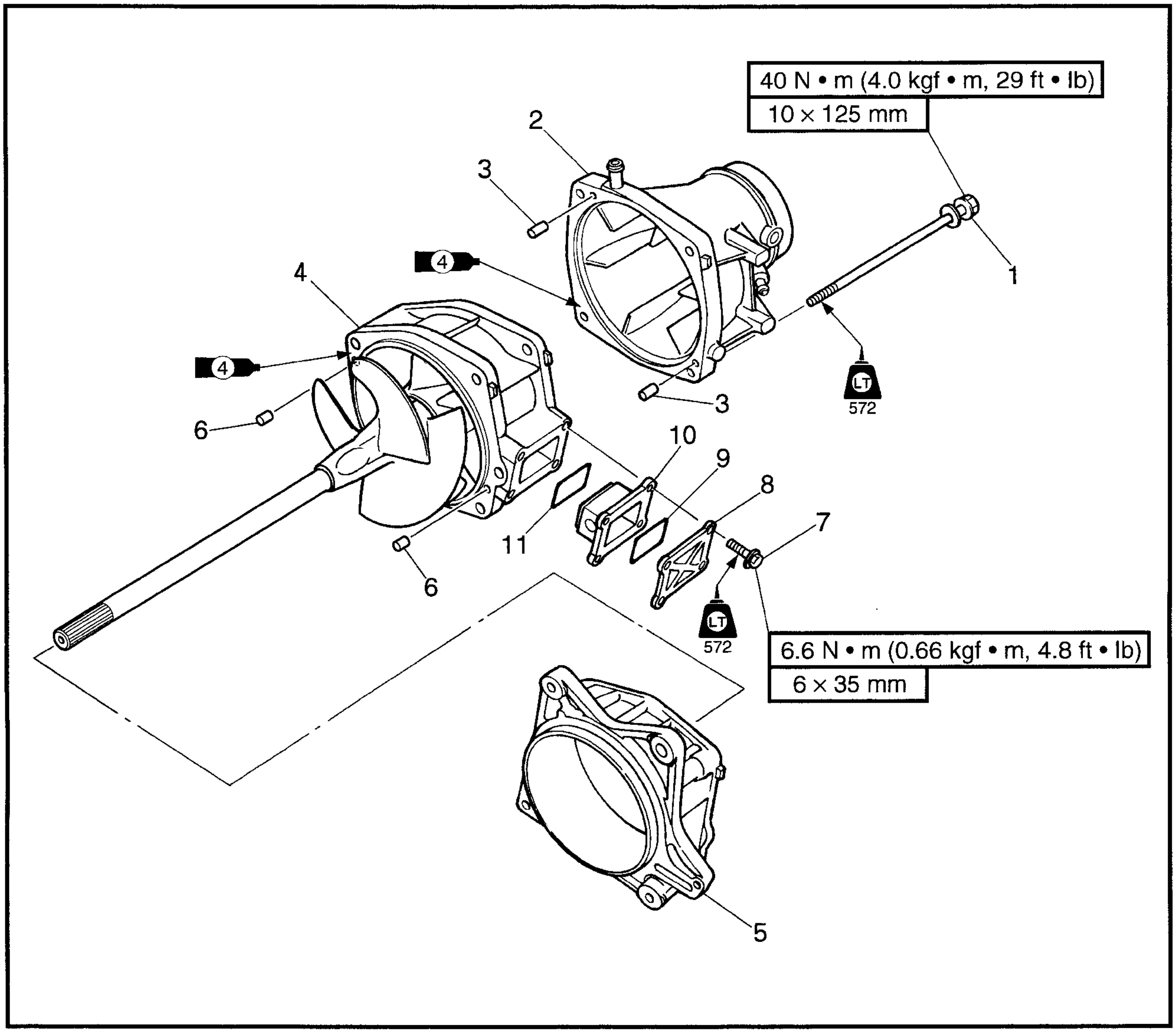
IMPELLER DUCT AND IMPELLER HOUSING 1
EXPLODED DIAGRAM



REMOVAL AND INSTALLATION CHART

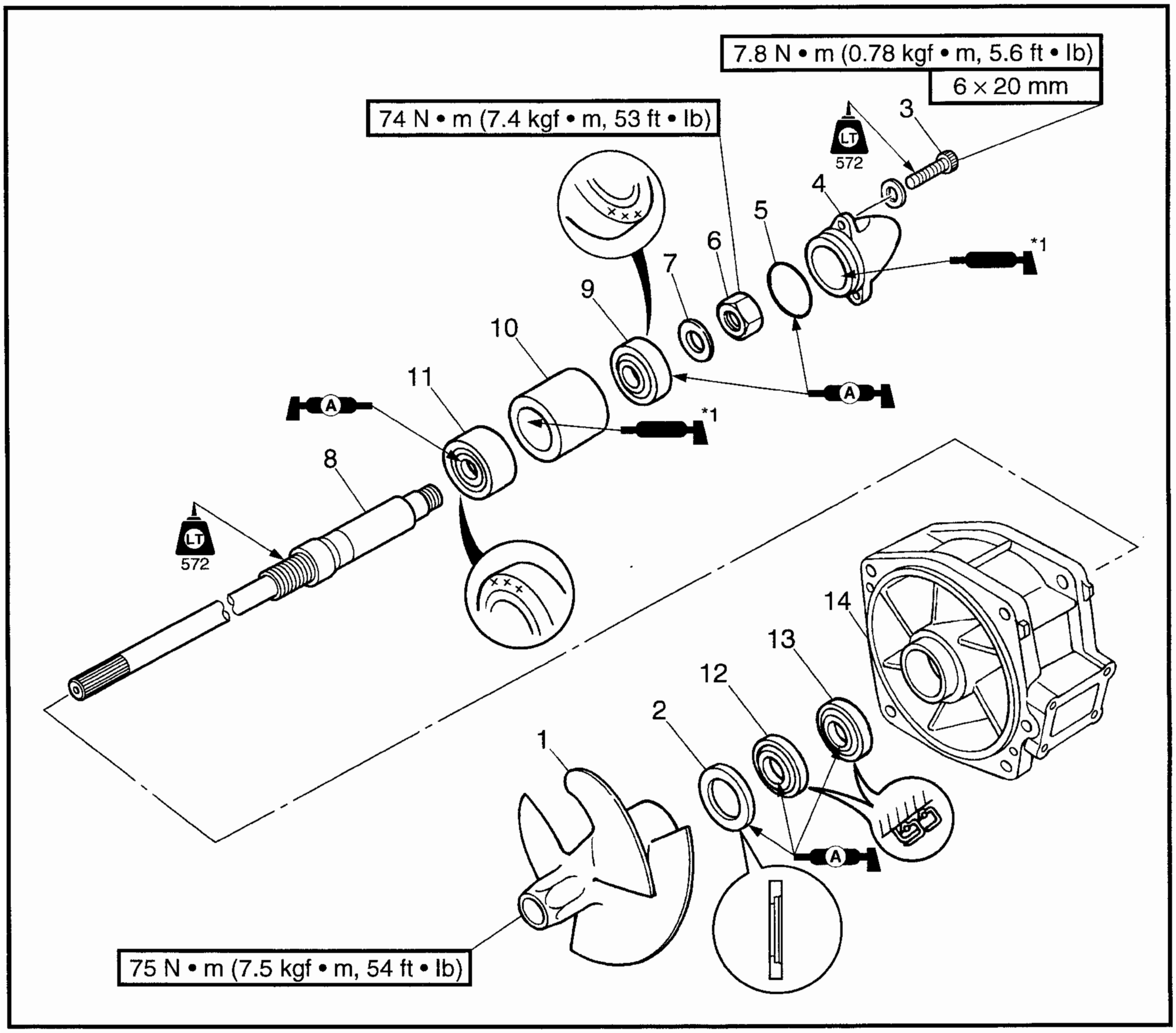
Step	Procedure/Part name	Q'ty	Service points
	IMPELLER DUCT AND IMPELLER HOUSING 1 REMOVAL		Follow the left "Step" for removal.
	Nozzle ring		Refer to "JET THRUST NOZZLE AND NOZZLE RING" in the base manual.
1	Bolt	4	
2	Nozzle	1	**NOTE:**
3	Pin	2	Clean the mating surfaces before applying Yamabond No. 4.
4	Impeller duct assembly	1	
5	Impeller housing 1	1	
6	Pin	2	

EXPLODED DIAGRAM



Step	Procedure/Part name	Q'ty	Service points
7	Bolt	4	
8	Water inlet cover	1	
9	Seal	1	
10	Water inlet strainer	1	
11	Seal	1	
			Reverse the removal steps for installation.

IMPELLER DUCT AND DRIVE SHAFT
EXPLODED DIAGRAM

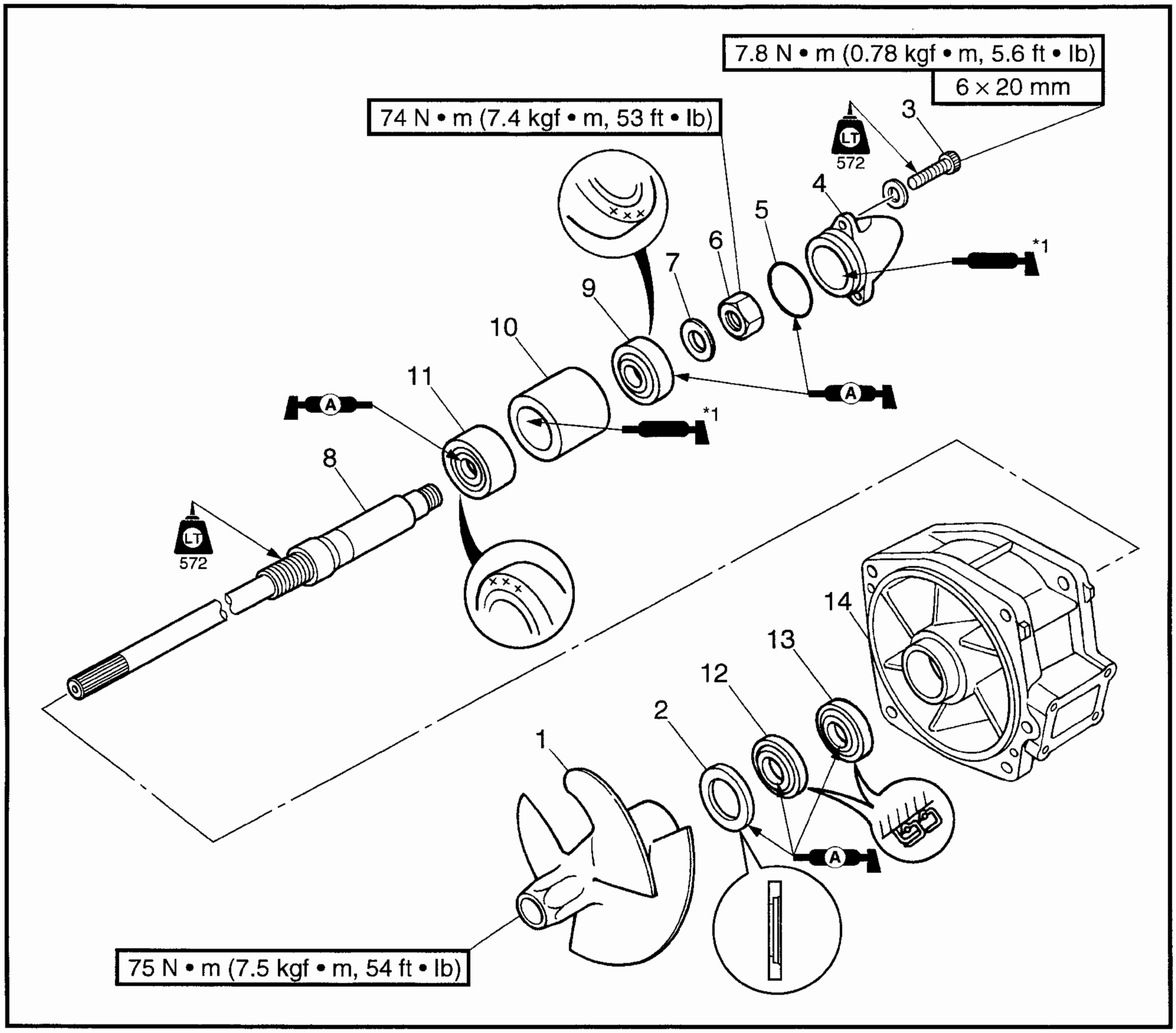


REMOVAL AND INSTALLATION CHART

Step	Procedure/Part name	Q'ty	Service points
	IMPELLER DUCT AND DRIVE SHAFT DISASSEMBLY		Follow the left "Step" for disassembly.
1	Impeller	1	Left-hand threads
2	Spacer	1	
3	Bolt/washer	3	
4	Cap	1	
5	O-ring	1	**Not reusable**
6	Nut	1	
7	Washer	1	

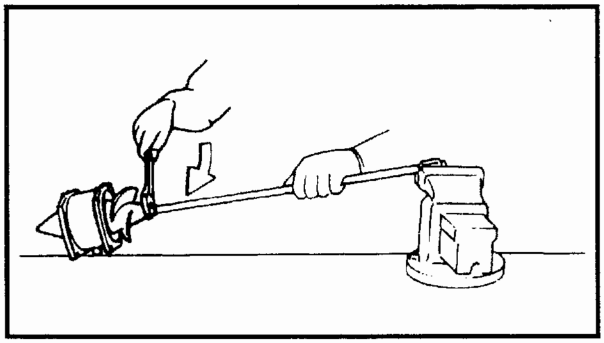
*1 EPNOC grease AP #0

EXPLODED DIAGRAM



Step	Procedure/Part name	Q'ty	Service points
8	Drive shaft	1	
9	Rear bearing	1	Not reusable
10	Spacer	1	
11	Front bearing	1	Not reusable
12	Oil seal	1	Not reusable
13	Oil seal	1	Not reusable
14	Impeller duct	1	
			Reverse the disassembly steps for assembly.

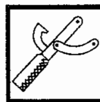
*1 EPNOC grease AP #0



SERVICE POINTS

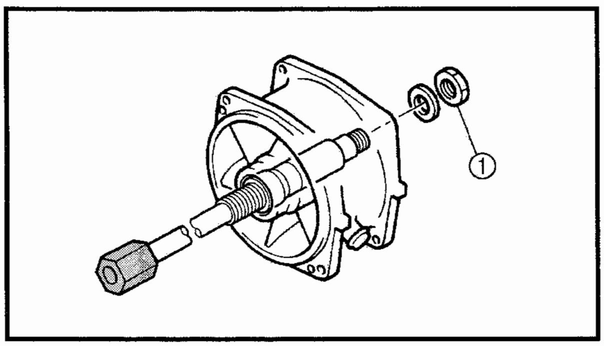
Drive shaft removal

1. Remove:
   - Impeller



Drive shaft holder:
YB-06151
Drive shaft holder 5:
90890-06519

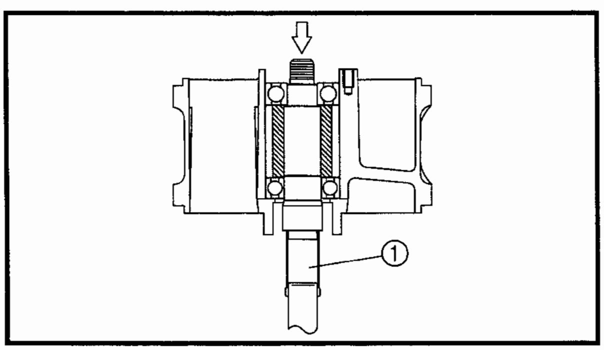
NOTE:
The impeller has left-hand threads. Turn the impeller clockwise to loosen it.



2. Remove:
   - Nut ①

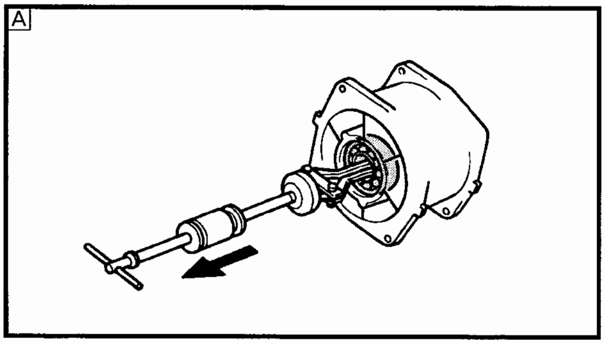


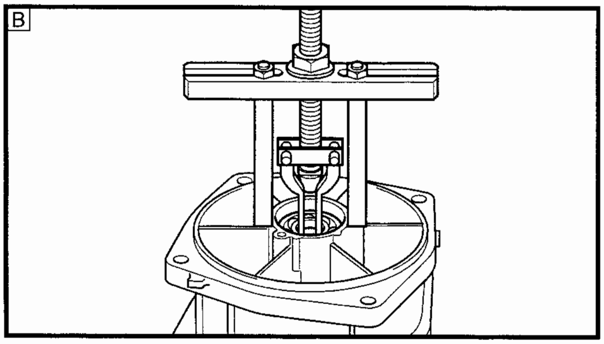
Drive shaft holder:
YB-06151
Drive shaft holder 5:
90890-06519



3. Remove:
   - Drive shaft ①

NOTE:
Remove the drive shaft with a press.

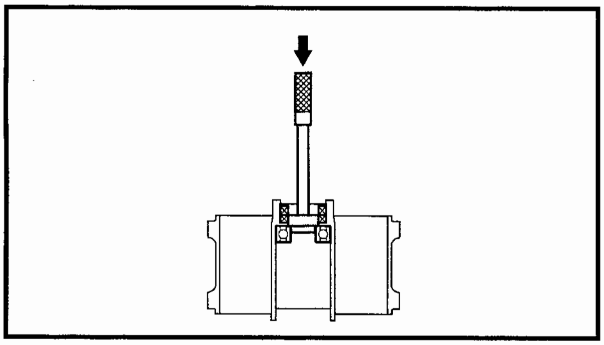




4. Remove:
   - Rear bearing

	Slide hammer and adapters: **YB-06096** **Stopper guide plate:** **90890-06501** **Bearing puller assembly:** **90890-06535** **Stopper guide stand:** **90890-06538**

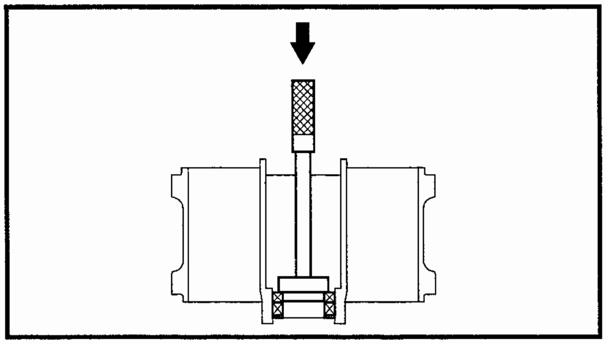
[A] For USA and Canada
[B] For worldwide



5. Remove:
   - Front bearing

	Driver handle—large: **YB-06071** **Driver rod L3:** **90890-06652** **Bearing housing needle bearing remover:** **YB-06112** **Needle bearing attachment:** **90890-06614**

NOTE:
Remove the front bearing with a press.



6. Remove:
   - Oil seal

Driver handle—large:
YB-06071
Driver rod L3:
90890-06652
Drive shaft needle bearing installer:
YB-06196
Needle bearing attachment:
90890-06614

NOTE:
Remove the oil seals with press.

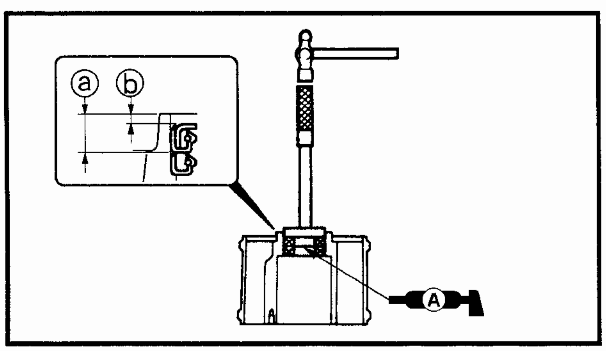
Impeller inspection

Refer to "JET PUMP UNIT" in Chapter 3 in the base manual.

Drive shaft inspection

1. Inspect:
   - Drive shaft
     Damage/wear → Replace.

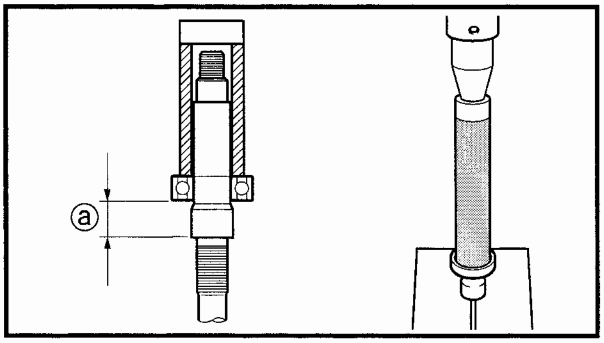
Drive shaft installation



1. Install:
   - Oil seals

Driver handle—large:
YB-06071
Driver rod LS:
90890-06606
Outer race installer—forward gear:
YB-06085
Ball bearing attachment:
90890-06631

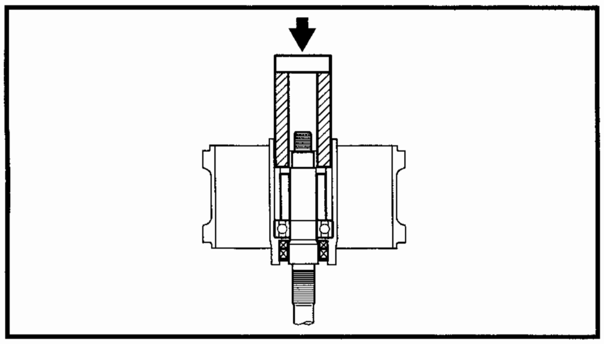
Distance ⓐ:
14.2 ± 0.2 mm (0.56 ± 0.01 in)
Distance ⓑ:
4.7 ± 0.2 mm (0.19 ± 0.01 in)



2. Install:
   - Front bearing

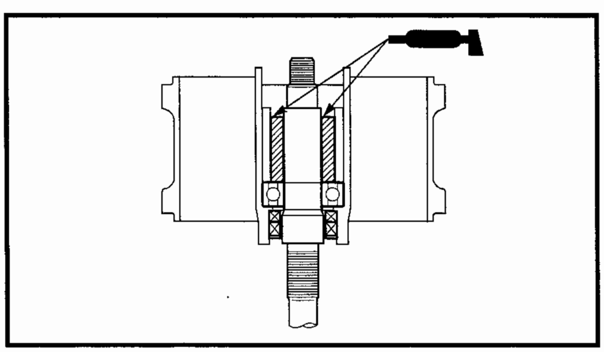
NOTE:
- Install the front bearing and drive shaft with a press.
- Press the front bearing with a pipe that is more than 85 mm (3.35 in) long, and which has an inner diameter of 25 mm (0.98 in).

	Distance ⓐ: **23.5 ± 0.1 mm (0.93 ± 0.004 in)**



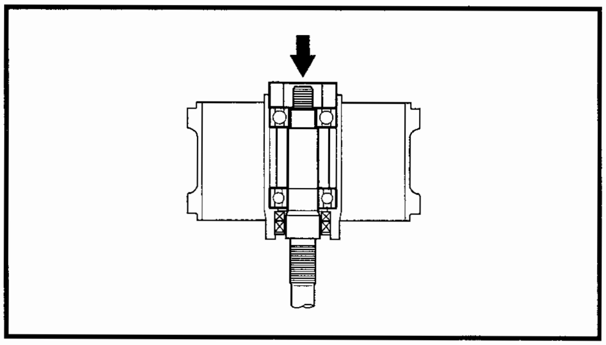
3. Install:
   - Drive shaft (with front bearing)
   - Spacer

NOTE:
Press the spacer and the front bearing with a pipe that is more than 33 mm (1.30 in) long, and which has an outer diameter less than 50 mm (1.97 in) and an inner diameter more than 26 mm (1.02 in).



4. Add:
   - EPNOC grease AP #0
     (between the drive shaft and spacer)

	Quantity: **20 g (0.7 oz)**

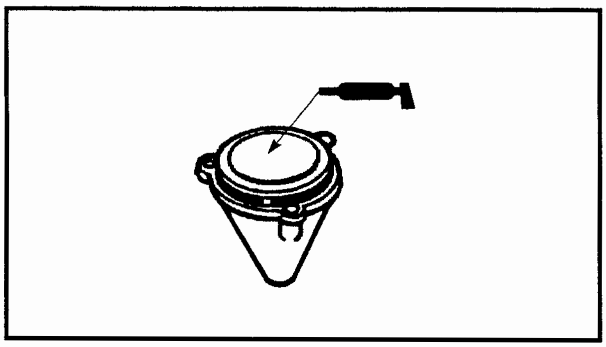


5. Install:
   - Rear bearing

	Drive shaft needle bearing depth stop: **YB-34474**

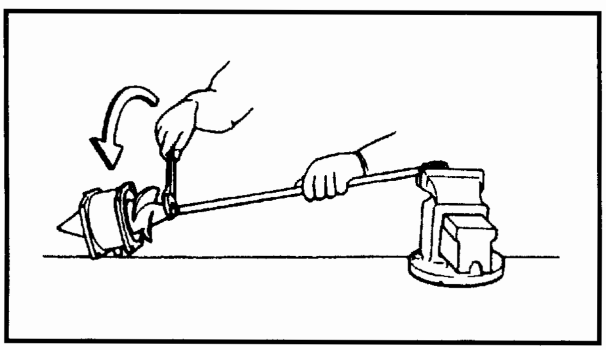
NOTE:

- Press the bearing inner/outer race at the same time holding the drive shaft and impeller duct.
- If a bearing inner/outer race attachment is not available, use a washer or pipe with an outer diameter of 46 mm (1.81 in) and an inner diameter of 20 mm (0.79 in).



6. Add:
   - EPNOC grease AP #0 (into the cap)

	Quantity: **20 g (0.7 oz)**

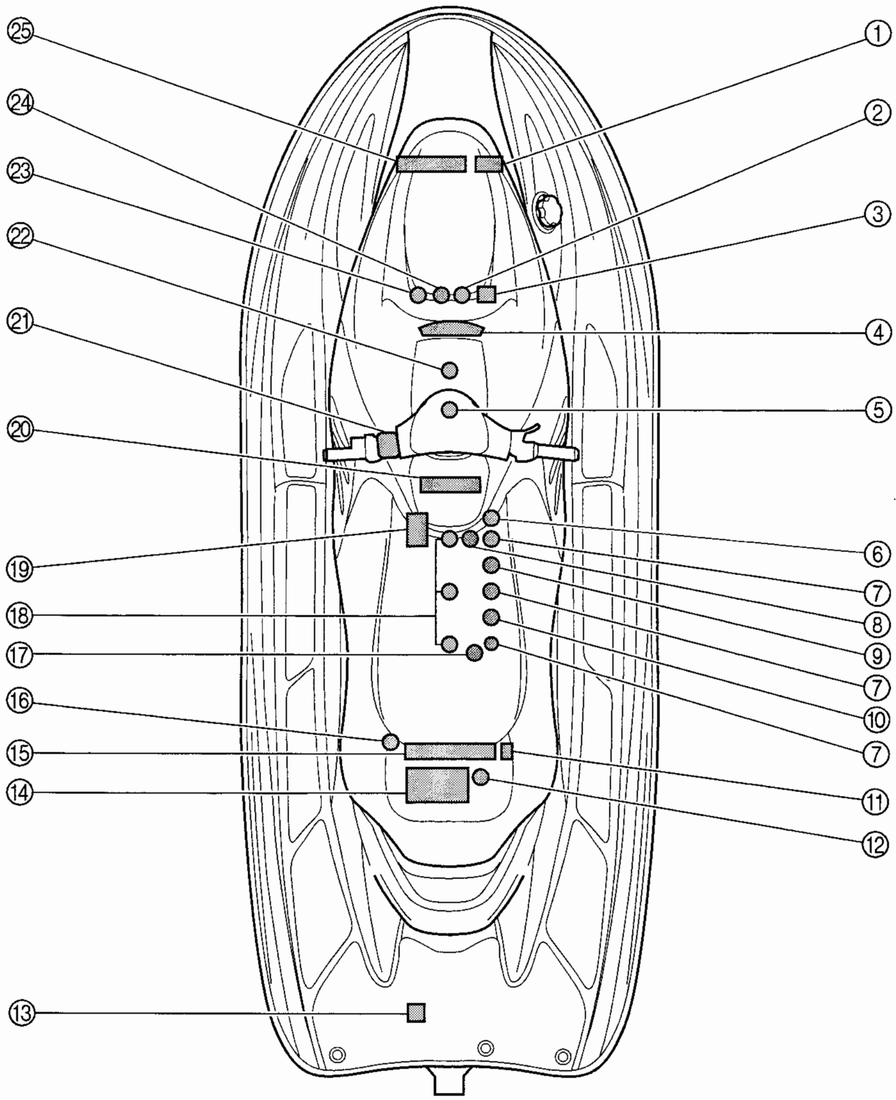


7. Install:
   - Nut
   - Impeller

	Drive shaft nut: **74 N • m (7.4 kgf • m, 53 ft • lb)** **Impeller:** **75 N • m (7.5 kgf • m, 54 ft • lb)** **LOCTITE 572**

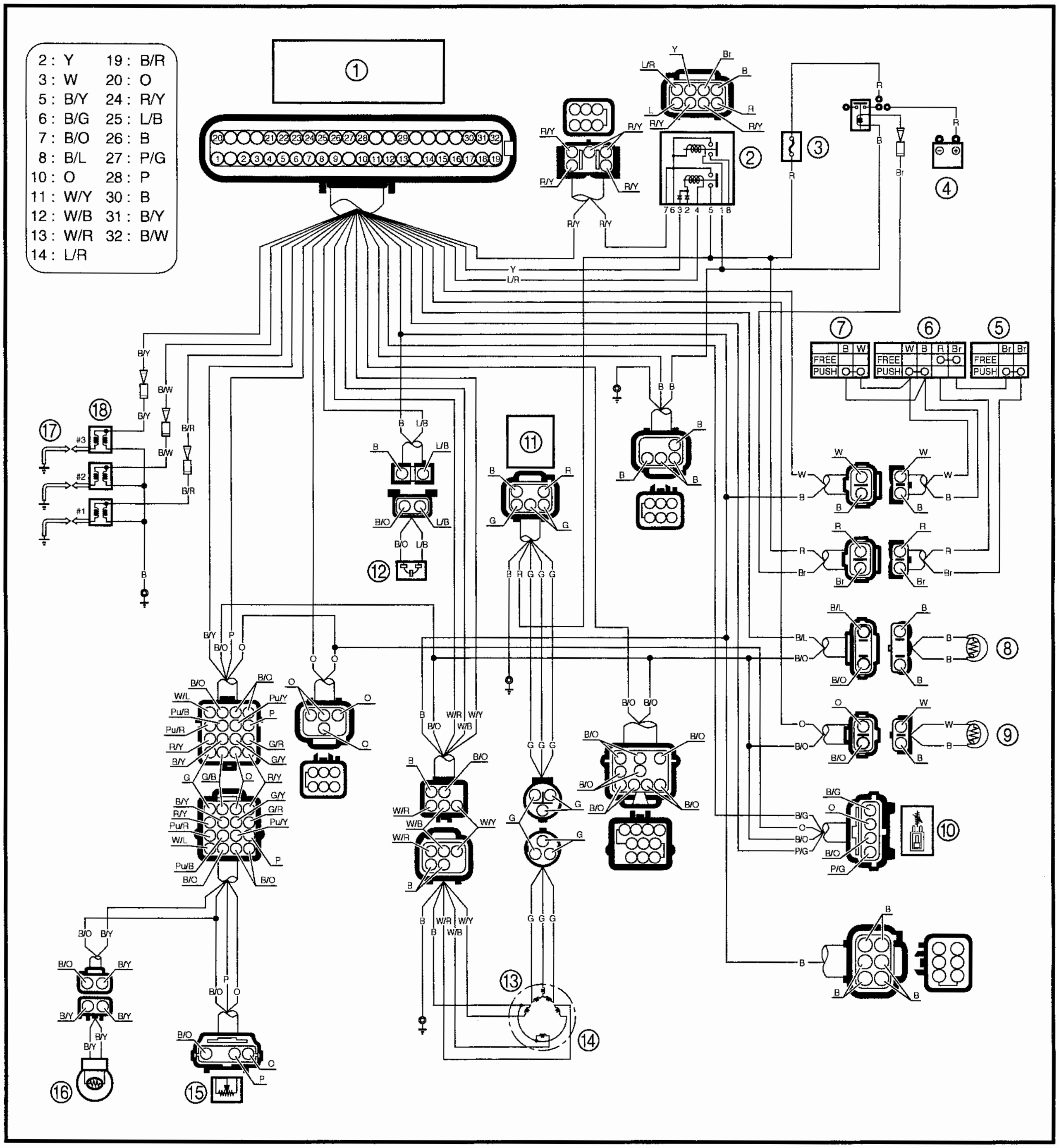
	Drive shaft holder: **YB-06151** **Drive shaft holder 5:** **90890-06519**

ELECTRICAL COMPONENTS



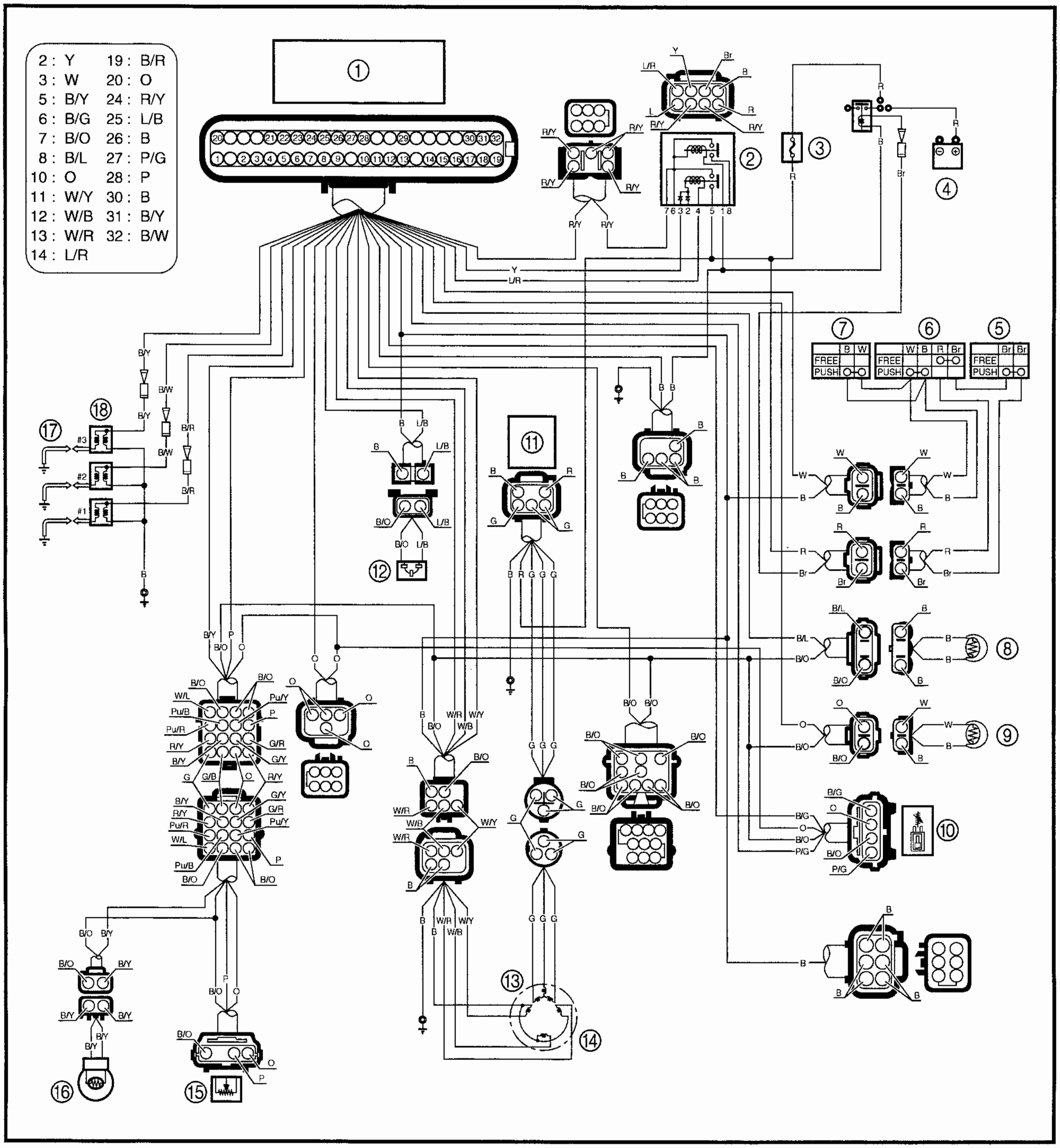
① Slant detection switch
② Fuel pump
③ Sensor assembly (intake air temperature and atmospheric pressure)
④ Multifunction meter
⑤ Steering sensor
⑥ Throttle position sensor
⑦ Fuel injectors
⑧ Engine temperature sensor
⑨ Throttle switch
⑩ Stepping motor
⑪ Rectifier/regulator
⑫ Electric bilge pump
⑬ Speed sensor
⑭ Battery
⑮ Electrical box
⑯ Cooling water temperature sensor
⑰ Exhaust temperature sensor
⑱ Spark plugs
⑲ Starter motor
⑳ Lighting coil and pickup coil
㉑ Engine stop switch, engine shut-off switch, and start switch
㉒ Oil level sensor
㉓ Buzzer
㉔ Fuel sender
㉕ ECM

IGNITION SYSTEM
WIRING DIAGRAM

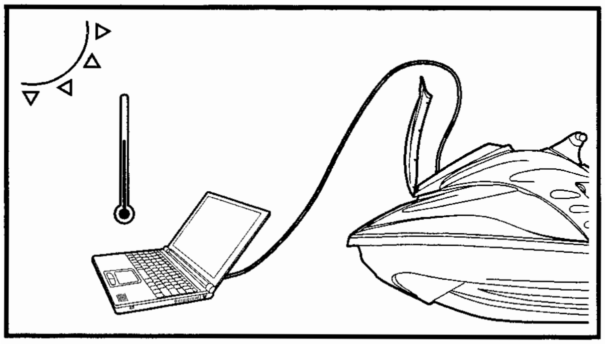


① ECM
② Main and fuel pump relay
③ Fuse (20 A)
④ Battery
⑤ Start switch
⑥ Engine shut-off switch
⑦ Engine stop switch
⑧ Exhaust temperature sensor
⑨ Cooling water temperature sensor
⑩ Sensor assembly (intake air temperature and atmospheric pressure)
⑪ Rectifier/regulator
⑫ Slant detection switch
⑬ Lighting coil
⑭ Pickup coil
⑮ Throttle position sensor
⑯ Engine temperature sensor
⑰ Spark plugs
⑱ Ignition coils

WIRING DIAGRAM



B	: Black	B/L	: Black/blue	W/B	: White/black
Br	: Brown	B/O	: Black/orange	W/L	: White/blue
G	: Green	B/R	: Black/red	W/R	: White/red
O	: Orange	B/W	: Black/white	W/Y	: White/yellow
P	: Pink	B/Y	: Black/yellow		
R	: Red	L/B	: Blue/black		
W	: White	L/R	: Blue/red		
Y	: Yellow	P/G	: Pink/green		
B/G	: Black/green	R/Y	: Red/yellow		

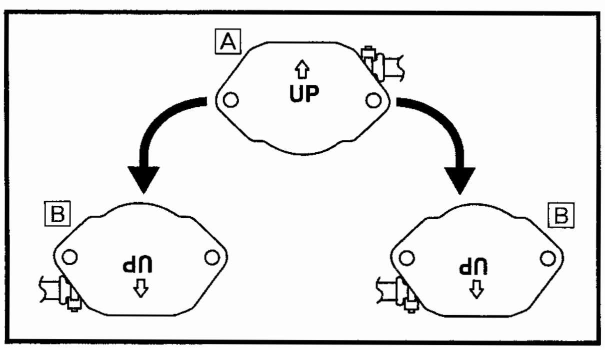


SENSOR ASSEMBLY

1. Check:
   - Intake air temperature sensor
     Out of specification → Replace the sensor assembly.

Checking steps:
- Measure the ambient temperature.
- Connect a computer to the watercraft and use the Yamaha Diagnostic System to display the intake air temperature.
- If the ambient temperature and the displayed intake air temperature differ by more than ± 5 °C (± 9 °F), replace the sensor assembly.

NOTE:
Check the sensor assembly when the engine is cold.



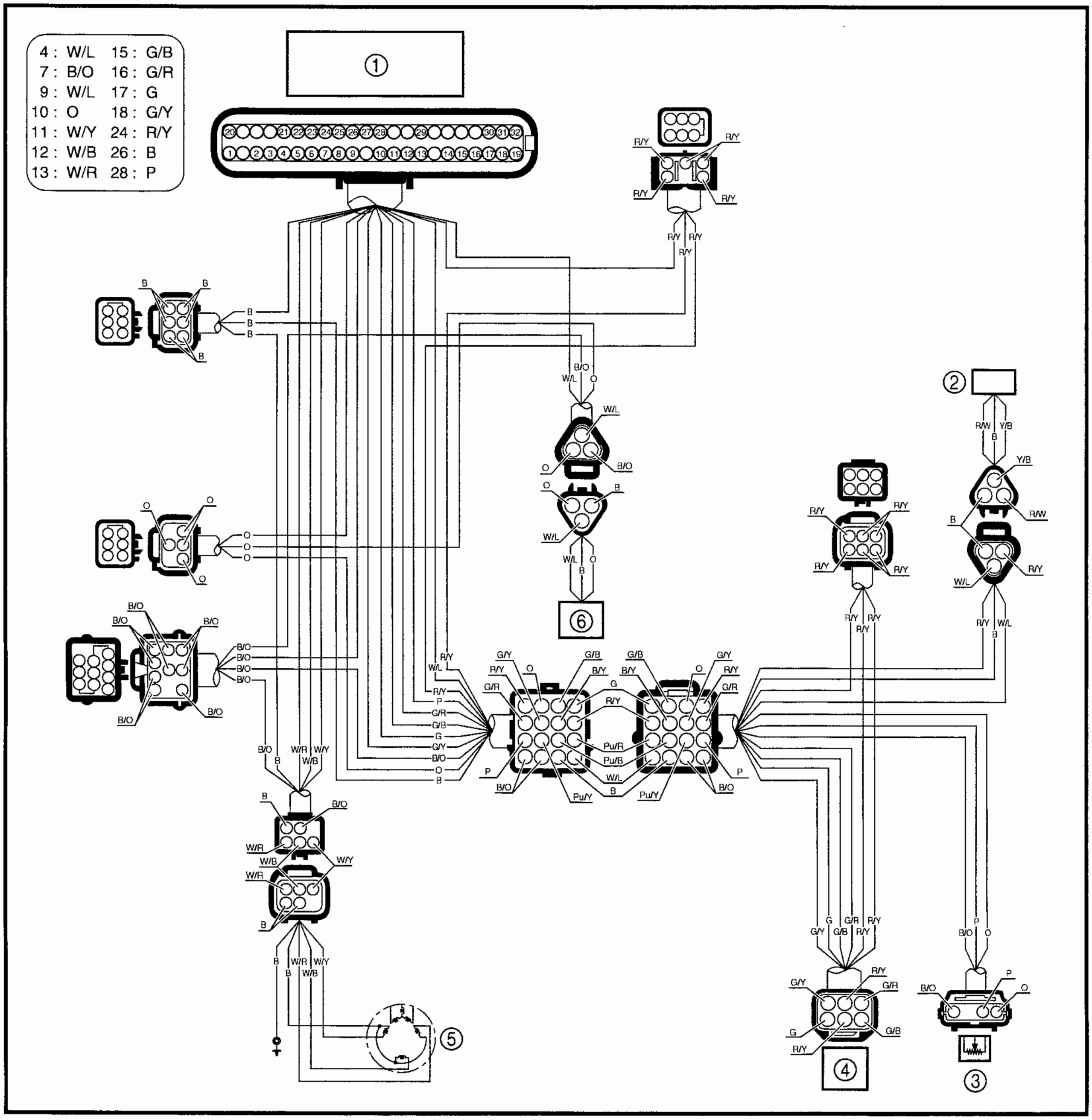
SLANT DETECTION SWITCH

1. Check:
   - Slant detection switch operation
     Out of specification → Replace.

Position	Lead color	
	Blue/black (L/B)	Black/orange (B/O)
Normal operation [A]	4.18–5.10 kΩ	
Overturned [B]	O———	———O

NOTE:
When checking the slant detection switch, be sure to turn the switch over to both the left and right as shown in the illustration.

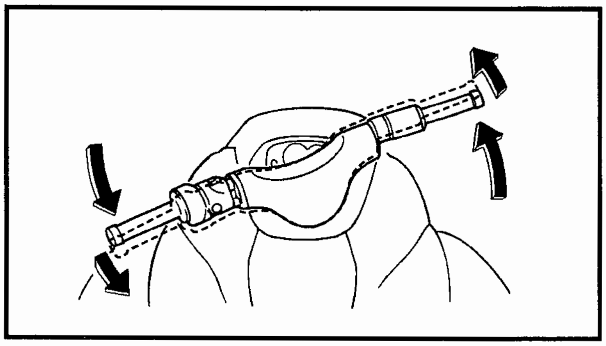
OFF THROTTLE STEERING SYSTEM
WIRING DIAGRAM

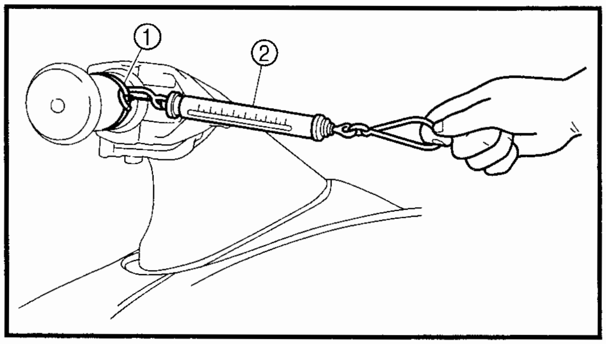


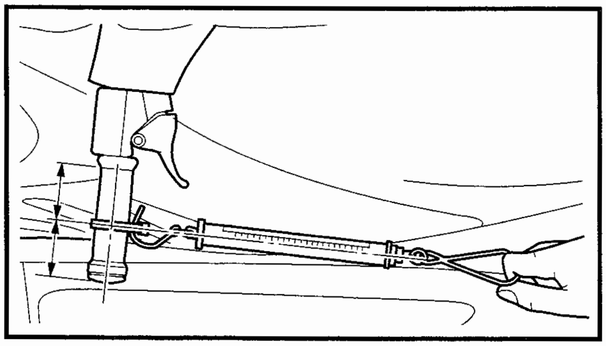
① ECM
② Throttle switch
③ Throttle position sensor
④ Stepping motor
⑤ Pickup coil
⑥ Steering sensor

B : Black
G : Green
O : Orange
P : Pink
B/O : Black/orange
G/B : Green/black
G/R : Green/red
G/Y : Green/yellow
R/W : Red/white
R/Y : Red/yellow

W/B : White/black
W/L : White/blue
W/R : White/red
W/Y : White/yellow
Y/B : Yellow/black







STEERING SENSOR

1. Check:
   - Steering sensor
     Malfunction → Replace the steering sensor.

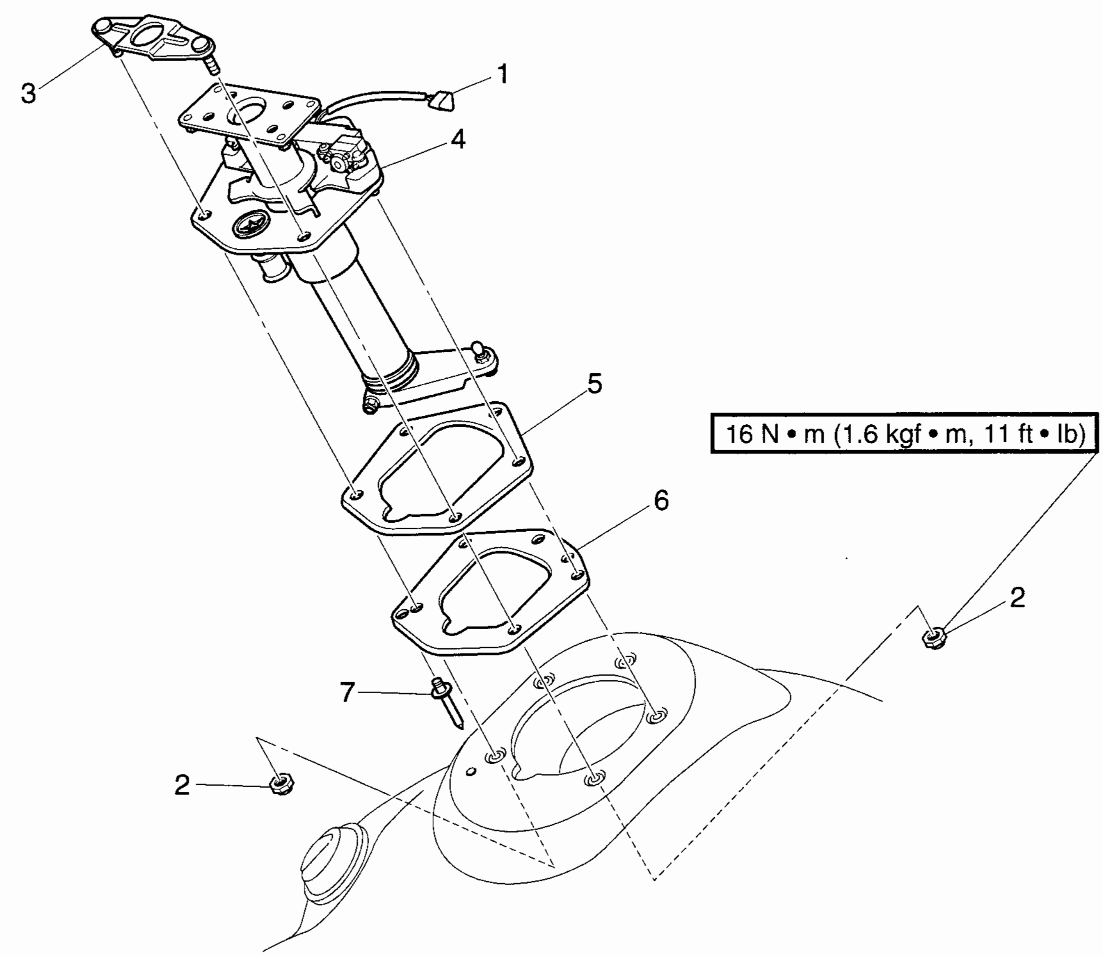
Checking steps:

- Turn the handlebar all the way to the left or right, and then release it.
- Install a plastic tie ① loosely around the center of the handlebar grip as shown.
- Hook a spring gauge ② onto the plastic tie.
- Hold the spring gauge at a 90° angle from the handlebar, and then pull the spring gauge with a force of 100 N (10 kgf, 22 lb).
- Check that the following is displayed in the “Engine Monitor” window of the Yamaha Diagnostic System.

When handlebar pulled	When handlebar not pulled
ON	OFF

- Use the same procedure to check that the steering sensor operates correctly when the handlebar is turned to both the left and right. Replace the steering sensor if it is malfunctioning.

STEERING COLUMN
EXPLODED DIAGRAM

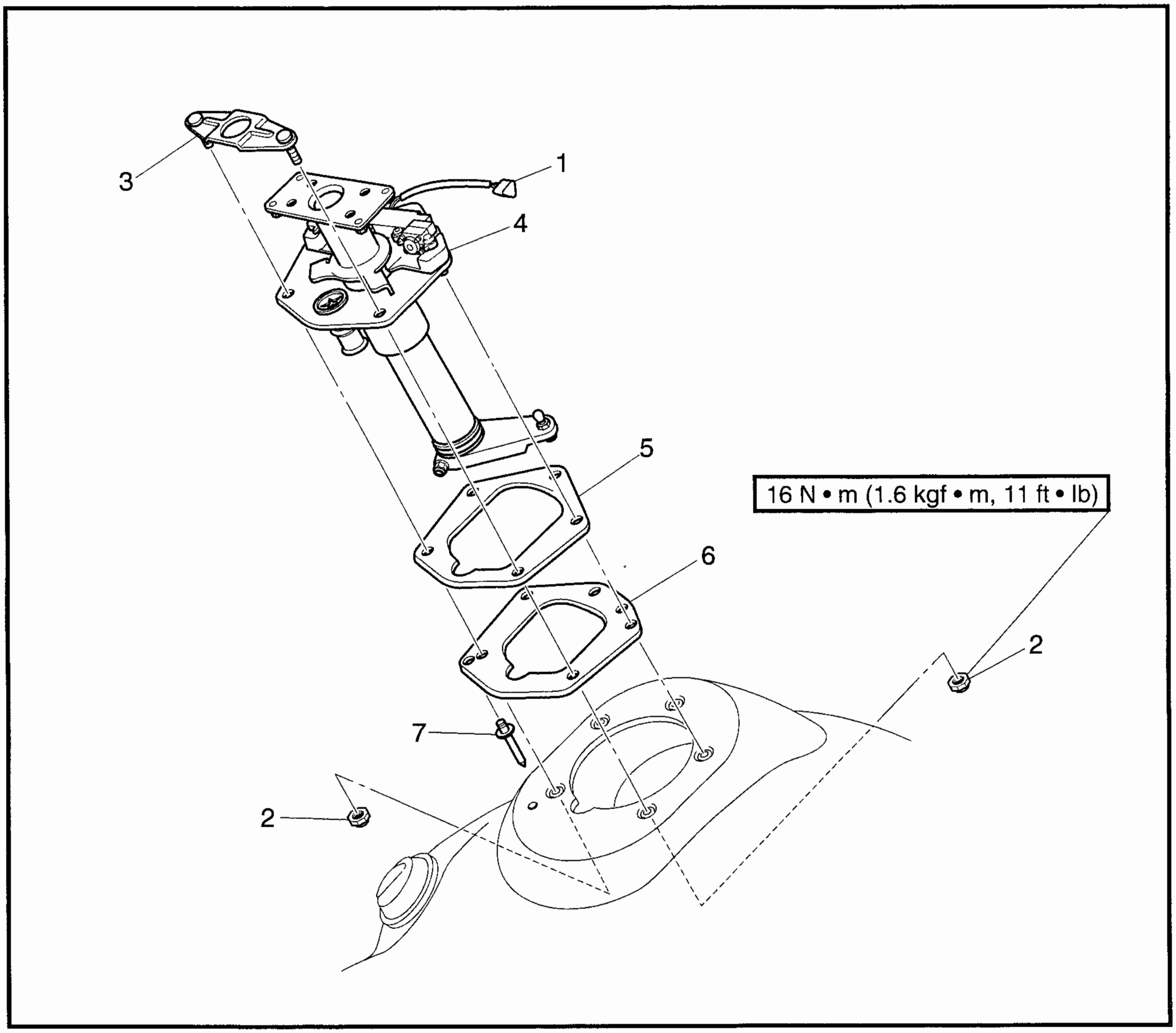


REMOVAL AND INSTALLATION CHART

Step	Procedure/Part name	Q'ty	Service points
	STEERING COLUMN REMOVAL		Follow the left "Step" for removal.
	Steering console cover assembly		Refer to "STEERING CONSOLE COVER" in the base manual.
	Steering cable end		Refer to "REMOTE CONTROL CABLES AND SPEED SENSOR LEAD" in the base manual.
1	Steering sensor coupler	1	
2	Nut	4	
3	Plate	1	
4	Steering column assembly	1	
5	Rubber seal	1	

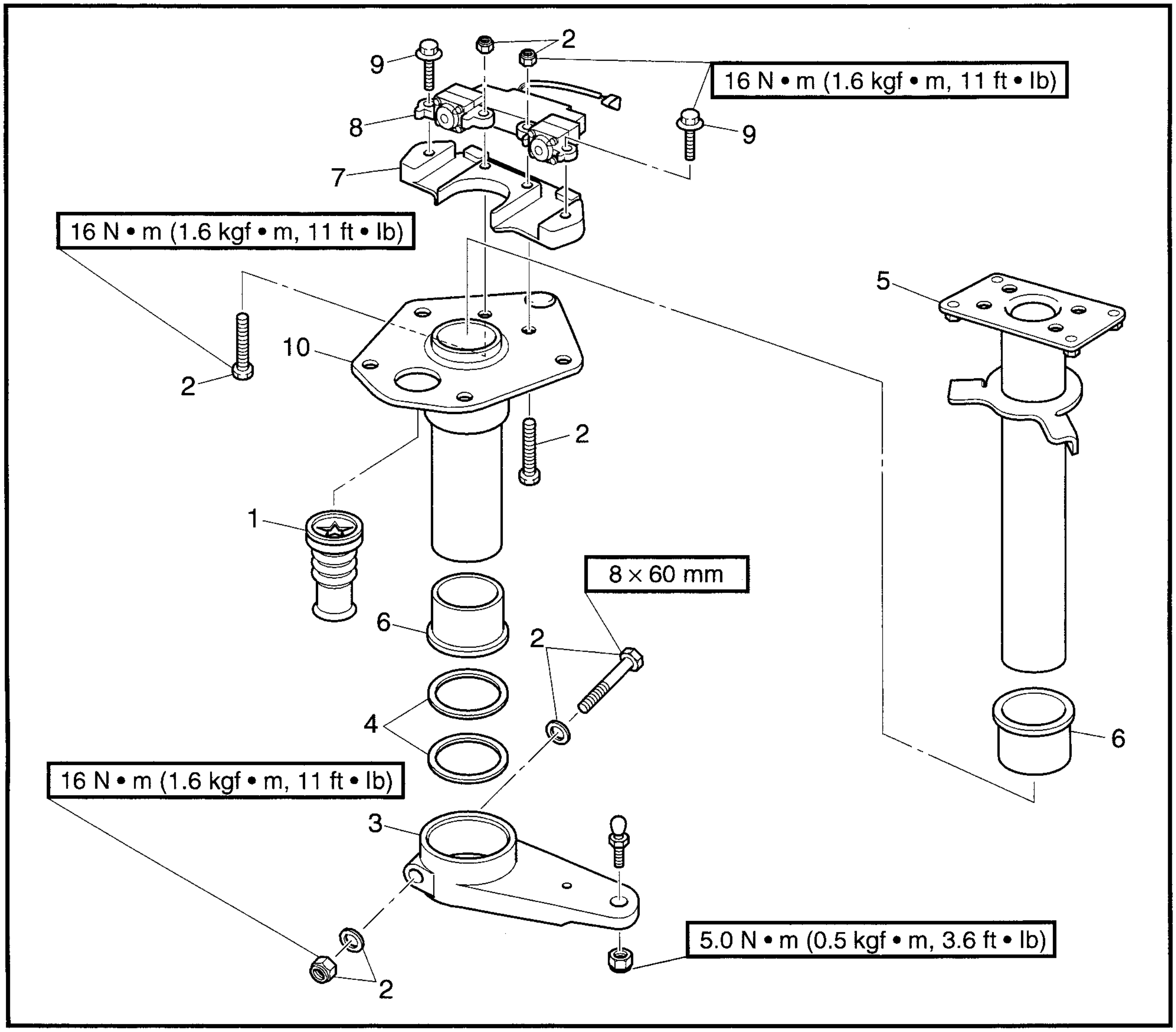
8

EXPLODED DIAGRAM



Step	Procedure/Part name	Q'ty	Service points
6	Plate	1	
7	Rivet	1	
			Reverse the removal steps for installation.

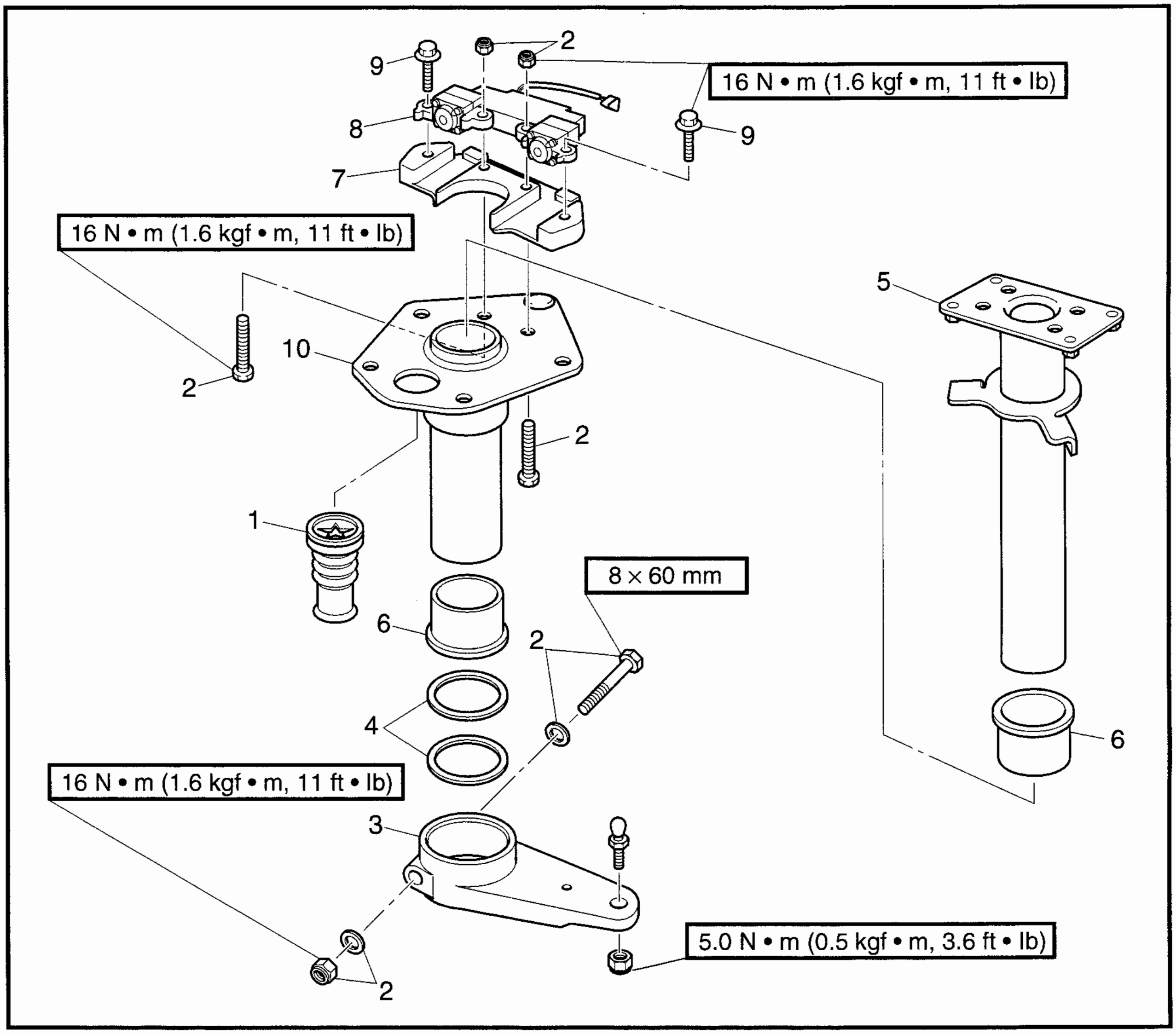
EXPLODED DIAGRAM



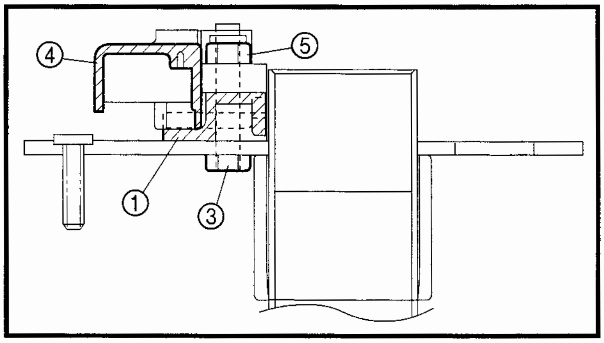
REMOVAL AND INSTALLATION CHART

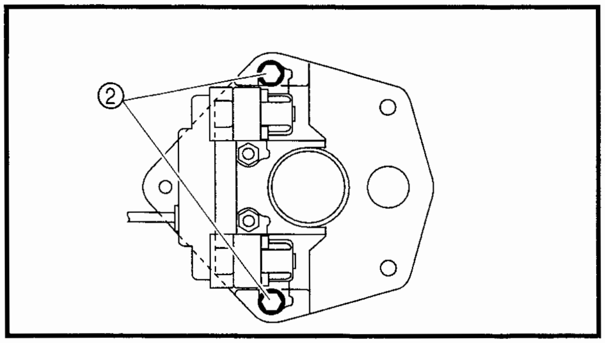
Step	Procedure/Part name	Q'ty	Service points
	STEERING COLUMN DISASSEMBLY		Follow the left "Step" for disassembly.
1	Grommet	1	
2	Bolt/washer/nut	3/2/3	
3	Steering arm	1	
4	Shim	—	Install the same number of shims installed originally at the factory.
5	Steering column	1	

EXPLODED DIAGRAM



Step	Procedure/Part name	Q'ty	Service points
6	Bushing	2	
7	Spacer	1	
8	Steering sensor	1	
9	Bolt	2	
10	Steering column housing	1	
			Reverse the disassembly steps for assembly.





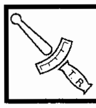
SERVICE POINTS

Steering column assembly

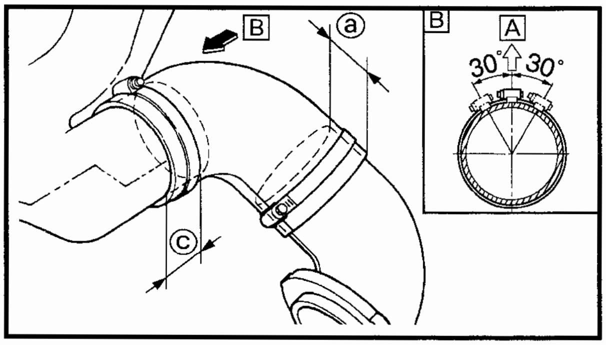
1. Install:
   - Spacer ①
   - Bolt ②
   - Bolt ③
   - Steering sensor ④
   - Nut ⑤

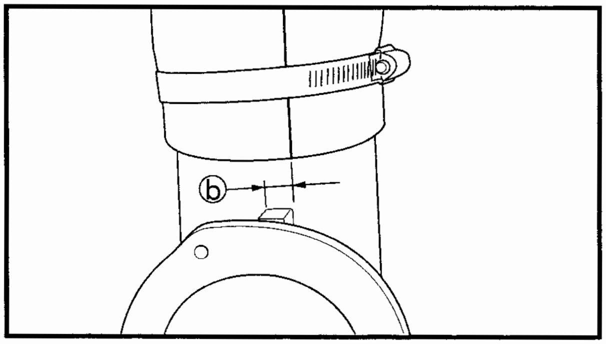
NOTE:

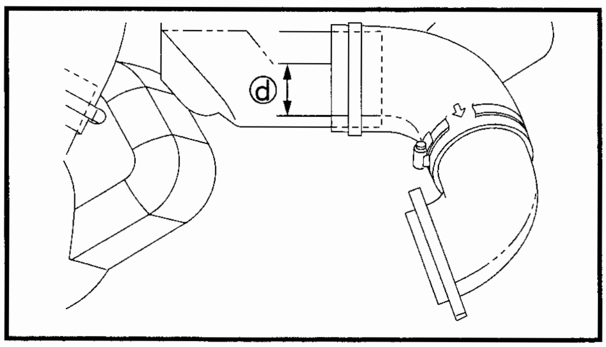
Tighten the nut while pushing the steering sensor against the spacer.



Nut:
16 N • m (1.6 kgf • m, 11 ft • lb)





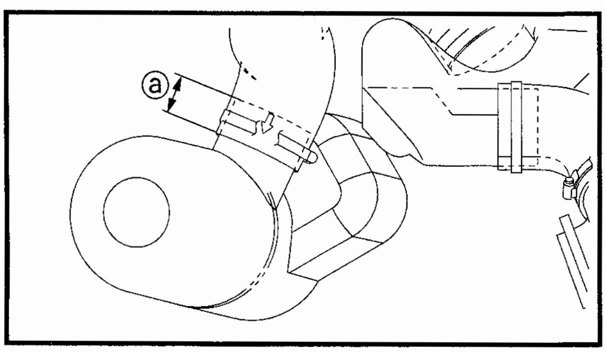


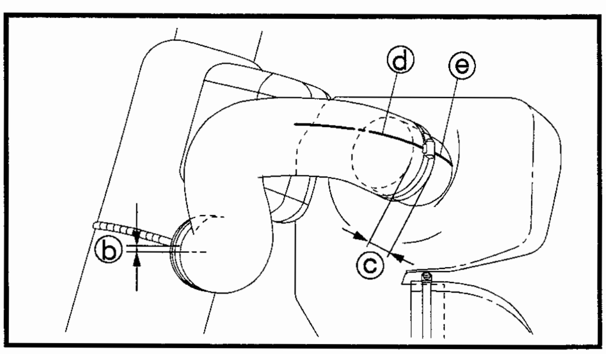
EXHAUST SYSTEM
SERVICE POINTS
Exhaust component parts assembly

1. Install:
   - Exhaust outlet
   - Rubber hose
   - Water tank

NOTE:
- Insert the exhaust outlet 45–50 mm (1.77–1.97 in) ⓐ into the rubber hose.
- Make sure that there is a distance of 10 mm (0.39 in) ⓑ between the parting lines of the exhaust outlet and the rubber hose.
- Insert the water tank 45–50 mm (1.77–1.97 in) ⓒ into the rubber hose.
- Make sure that there is a distance of 30 mm (1.18 in) ⓓ between the parting lines of the water tank and rubber hose.

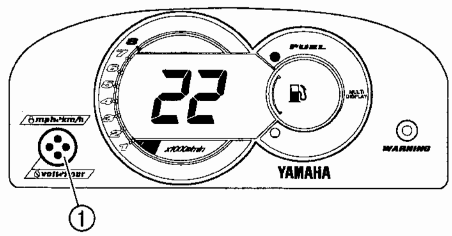
A Bow





2. Install:
   - Rubber hose

NOTE:
- Install the rubber hose 45–50 mm (1.77–1.97 in) ⓐ into the water lock.
- Make sure that there is a distance of 10 mm (0.39 in) ⓑ between the parting lines of the water lock and the rubber hose.
- Install the rubber hose 45–50 mm (1.77–1.97 in) ⓒ into the water tank.
- Align the parting line ⓓ of the rubber hose with the parting line ⓔ of the water tank.



TROUBLE ANALYSIS
SELF-DIAGNOSIS
With the engine running, press the select button ① for 8 seconds and check if an error code is indicated on the multifunction meter.

Code	Symptom
01	Normal
13	Pickup coil malfunction
15	Engine temperature sensor malfunction
18	Throttle position sensor (TPS) malfunction
19	Incorrect battery voltage
22	Sensor assembly (atmospheric pressure sensor) malfunction
23	Sensor assembly (intake air temperature sensor) malfunction
47	Slant detection switch malfunction
48	Incorrect data transmission
53	Exhaust temperature sensor malfunction
54	Stepping motor malfunction
55	Steering sensor malfunction
59	Memory data malfunction
65	Cooling water temperature sensor malfunction
66	Stepping motor stuck open
67	Stepping motor stuck closed

If the Yamaha Diagnostic System is not used to check the symptoms listed in the table, the error codes can be checked easily with the self-diagnosis in the multifunction meter. However, if there are numerous error codes displayed, be sure to check them with the Yamaha Diagnostic System.

WIRING DIAGRAM
GP1300R

① ECM
② Sensor assembly (intake air temperature and atmospheric pressure)
③ Spark plugs
④ Ignition coils
⑤ Fuse (20 A)
⑥ Fuses (3 A)
⑦ Main and fuel pump relay
⑧ Starter relay
⑨ Starter motor
⑩ Battery
⑪ Rectifier/regulator
⑫ Throttle switch
⑬ Electrical bilge pump
⑭ Exhaust temperature sensor
⑮ Cooling water temperature sensor
⑯ Throttle position sensor
⑰ Fuel injectors
⑱ Engine temperature sensor
⑲ Stepping motor
⑳ Lighting coil
㉑ Pickup coil
㉒ Steering sensor
㉓ Oil level sensor
㉔ Buzzer
㉕ Speed sensor
㉖ Multifunction meter
㉗ Fuel pump
㉘ Fuel sender
㉙ Engine stop switch
㉚ Engine shut-off switch
㉛ Start switch
㉜ Slant detection switch

[A] To tachometer

Color code

B : Black
Br : Brown
G : Green
Gy : Gray
L : Blue
O : Orange
P : Pink
R : Red
W : White
Y : Yellow
B/G : Black/green
B/L : Black/blue
B/O : Black/orange
B/R : Black/red
B/W : Black/white
B/Y : Black/yellow
G/B : Green/black
G/R : Green/red
G/Y : Green/yellow
L/B : Blue/black
L/R : Blue/red
P/G : Pink/green
Pu/B : Purple/black
Pu/R : Purple/red
Pu/Y : Purple/yellow
R/W : Red/white
R/Y : Red/yellow
W/B : White/black
W/L : White/blue
W/R : White/red
W/Y : White/yellow
Y/B : Yellow/black

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